DOCUMENT RESUME

ED 210 540 CE 030 841

TITLE	Abolishing Mandatory Retirement (Implications for America and Social Security of Eliminating Age Discrimination in Employment). An Interim Report Prepared by the U.S. Department of Labor as Required by the Age Discrimination in Employment Act.
INSTITUTION	Congress of the U.S., Washington, D.C. House Select Committee on Aging.; Department of Labor, Washington, D.C.
REPORT NO	Comm-Pub-97-283
PUB DATE	Aug 81
NOTE	374p.: Not available in paper copy due to small print.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Age Discrimination; Employer Attitudes; Federal Legislation; Labor Force Nonparticipants; Older Adults; Personnel Policy; Policy Formation; *Public Policy; *Retirement; *Retirement Benefits; *Work Attitudes
IDENTIFIERS	*Age Discrimination in Employment Act Amend 1980; *Mandatory Retirement; National Policy; Social Security Benefits

ABSTRACT

The results of more than two-and-one-half years of study by the United States Department of Labor on the effects of the Age Discrimination in Employment Amendments on older workers' retirement plans indicate that removing employment obstacles facing older workers will increase labor force participation rates and, in turn, help refinance the Social Security system more compassionately than simply reducing retirement benefits. Recent legislation raising the mandatory retirement age to 70, when combined with the future elimination of mandatory retirement altogether and the removal of employment disincentives in present pension plans, would together add nearly one-half million older workers to the labor force by the year 2000. In contrast, a 10 percent reduction in Social Security benefits would increase labor force participation only by 64,000, while at the same time placing heavy economic burden on millions of elderly retirees. (KC)

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ED210540

ABOLISHING MANDATORY RETIREMENT

(Implications for America and Social Security of Eliminating Age Discrimination in Employment)

An Interim Report Prepared by the U.S. Department of Labor
as required by the Age Discrimination in Employment Act

PRINTED AT THE REQUEST OF THE CHAIRMAN
OF THE
SELECT COMMITTEE ON AGING
HOUSE OF REPRESENTATIVES
NINETY-SEVENTH CONGRESS
FIRST SESSION

U.S. DEPARTMENT OF EDUCATION
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AUGUST 1981

Comm. Pub. No. 97-283

Printed for the use of the Select Committee on Aging

U.S. GOVERNMENT PRINTING OFFICE
81-662 O WASHINGTON : 1981

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

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FOREWORD

In recent months Congress has been bombarded with a spate of proposals to solve the financing problems of the Social Security system. The most controversial proposal was one made by the President on May 12 to drastically reduce early retirement benefits in order to "encourage older workers to remain in the labor force longer." The Administration should be applauded for its faith in the productive capacity of our nation's older citizens and for its recognition that increasing the number of older workers is a positive goal. But its motives must be questioned, especially in light of information which shows that cutting Social Security benefits may not have the desired effect.

In particular, a Labor Department study, which is being withheld by the Administration but released here for the first time, demonstrates that simply cutting benefits will not increase labor force participation very much. What the study does show, however, is that eliminating various employment obstacles, such as mandatory retirement and work disincentives in pension plans, would do much more to enable older workers to remain employed, thereby helping the economy and the Social Security system.

The Labor Department study, uncensored and fully reproduced in the following pages, was originally required by Congress as part of the 1978 Amendments to the Age Discrimination in Employment Act (ADEA) which raised the permissible mandatory retirement age to 70 for most non-Federal employees. As part of that legislation, Congress mandated the Secretary of Labor to conduct a study to determine the impact of this new policy on older and younger workers and employers, and to determine the probable impact of abolishing mandatory retirement and other remaining forms of age discrimination in the future. The interim results of the study were to be delivered to Congress in January 1981, but for reasons which are evident throughout the report the study has yet to be officially released.

The Labor Department is now seven months late in releasing its interim report. Such a violation of statute is unacceptable. When an issue is of such vital national concern as the impact of alternative employment and retirement policies on the future financial status of Social Security, it is imperative that all pertinent information be made available to Congress and the American public. Only through a complete and open review of available data can the Congress be expected to arrive at a viable solution to the Social Security and larger retirement income problems facing the nation today. For this reason I am releasing the Labor Department's interim report on the Effects of Raising the Age Limits in the Age Discrimination in Employment Act.

IV

OBSTACLES TO CONTINUED WORK

This report deals with many critical issues pertaining to employment and retirement policies in America, but the overall message can be summarized as follows:

> Older workers are caught in the jaws of a vise, in which mandatory retirement policies, work disincentives in pension plans and pressures to get out of the workforce early exert force in one direction, while inflation and threatened retirement benefit reductions exert pressure in the other. Removing the obstacles to employment would allow many older workers to continue in their employment or return to work, while across-the-board Social Security benefit cuts would do very little, aside from increasing the hardship for millions of retirees.

At present, 28 million persons—7 out of every 10 workers between the ages of 40 and 70—are protected by Federal legislation against age discrimination in employment. Nonetheless, these protections are inadequate. According to this report:

- 51 percent of all workers face an employer-imposed mandatory retirement age;
- 42 percent of all workers covered by pensions would receive no (or minimal) pension benefit increases for work performed after age 65;
- one-third of all college professors reaching age 65 this year will face mandatory retirement on their 65th birthday
- 20 percent of all top executives, and 85 percent of top executives in large firms, will be forced to retire at age 65;
- all workers who forfeit Social Security benefits in order to remain employed will never regain those lost benefits because the system is designed to discourage delayed retirement.

All of these policies are allowed under present Federal law. The net result is a message to millions of older workers that their skills and productive abilities are no longer needed—they must retire.

As a result of these obstacles and a variety of early retirement incentives offered by employers, the labor force participation rate of older workers has declined dramatically over the past 25 years. In 1955, 65 percent of men age 55 and over were working, but only 46 percent were working by 1980. Among men 65–69 years of age, 57 percent were employed in 1955, compared to only 28.5 percent in 1980. The decline in employment among men 65 and over has accelerated since 1970 when 27 percent were employed—versus 19.8 percent in 1980—and the Labor Department predicts further reductions in the rate of labor force participation among older males unless significant changes are made in employment and retirement policies.

The Labor Department acknowledges the seriousness of the problem. The report states:

> There are several reasons for concern about the continuing decline in labor force participation by older persons. First, the future economic position of an older person may be endangered by early labor force withdrawal since longer periods of retirement are now anticipated under conditions of sustained inflation; second, earlier retirements increase the financial stress on both Social

Security and private pension plans; third, shortages of skilled labor could develop in certain industries as could general labor shortages, and fourth, it appears that older persons' preferences for part-time employment are increasing but that labor demand is not sufficient to satisfy their current employment needs. For these reasons, the potential for reversing the decline in labor force participation and raising or eliminating the mandatory retirement age have become major public policy issues.

ALTERNATIVE MEANS OF INCREASING EMPLOYMENT AMONG OLDER WORKERS

The report examines changes in retirement policies to determine their impact on the labor force participation rates of older workers through the year 2000. Three policy changes were analyzed:

- the complete elimination of mandatory retirement;
- removal of an important work disincentive from employer-sponsored pension plans; and
- a cut in Social Security benefits of ten percent across-the-board.

All of these proposals were expected to increase labor force participation rates, the first two by removing employment obstacles and the third by making it more difficult to retire. The results are striking. The combined effect of eliminating mandatory retirement and removing pension obstacles would result in an increase of 262,800 older workers, while cutting Social Security benefits would only increase the labor force by 64,000. The results of each policy change are summarized below.

Eliminating Mandatory Retirement.—Raising the mandatory retirement age to 70 from 65, as was done in the 1978 Amendments to the Age Discrimination in Employment Act, is expected to result in an additional 212,000 workers age 60–70 remaining in the labor force. *If mandatory retirement ages were abolished altogether another 195,100 older workers would stay on their jobs.* Thus, by simply removing the barrier of mandatory retirement, 407,100 workers would continue working, thereby contributing to the economy and lessening the burden on Social Security.

Removing Work Disincentives from Pensions.—A gap in the ADEA allows employers to freeze pension benefits for workers who remain employed after age 65. Since the accrual of pension benefits is a significant portion of a worker's compensation, any discontinuance of these benefit accruals is equivalent to a reduction in total pay and encourages older workers to retire. It is not surprising, therefore, that *removing this work disincentive would, by the year 2000, expand the labor force by 67,700 older workers.*

Cutting Social Security Benefits.—The third change in retirement policy investigated by the Labor Department was a ten percent across-the-board cut in Social Security benefits. Even though a reduction in benefits of this magnitude would necessarily lower the retirement standard of living of millions of persons, it would have a negligible effect on the retirement decisions of older workers. *The result would be an increase in older worker employment of only 64,000 workers by the year 2000.* A 20 percent reduction in benefits was also analyzed, and the result was a net *loss* of older workers.

These results prompted the Labor Department to conclude that, "*An across-the-board cut in Social Security benefits should not* a priori *be assumed to stimulate a delay in retirement simply by virtue of constituting a reduction in available retirement income.*" The reasons for this are not clearly spelled out in the report.

But what is clear is that older workers face many obstacles to employment. Labor Department statistics indicate that once unemployed, older workers remain our of the labor force twice as long as younger workers. As a result, many become discouraged and simply drop into retirement rather than continue the apparently futile search for a job. Furthermore, only 22 percent of early retirees—those retiring before age 65—left the labor force voluntarily, according to Social Security Administration studies. One-half cite ill health as the cause of retirement while 20 percent report employment-related problems.

Therefore, simply attempting to compel older individuals to work longer by cutting their future Social Security retirement benefits will not result in a significant increase in their labor force participation rates. As can be seen from the following summary table, eliminating mandatory retirement and pension-related work obstacles would do more to promote employment among each of the four older age groups (except the 60–61 year olds where the effects are comparable) than cutting Social Security benefits by 10 percent. (See Table 1.)

TABLE 1.—CHANGES IN THE PROJECTED SIZE OF THE LABOR FORCE IN THE YEAR 2000 CAUSED BY CUTTING SOCIAL SECURITY BENEFITS VERSUS ELIMINATING MANDATORY RETIREMENT OR REMOVING EMPLOYMENT OBSTACLES IN PENSIONS

Age group	Social security benefits[1] 10 percent cut	Retirement, pension policy: Eliminate mandatory retirement	Retirement, pension policy: Remove pension obstacles[2]
Total 60 to 70	64,000	195,100	67,700
60 to 61	13,000	12,200	−18,300
62 to 64	10,000	27,900	55,400
65 to 67	13,000	64,700	15,500
68 to 70	28,000	90,300	15,100
Total increase in labor force	+64,000	+262,800	

[1] Assumes no change in present law regarding mandatory retirement.
[2] Assumes elimination of mandatory retirement.

THE ECONOMIC AND LABOR FORCE IMPACT OF ADDITIONAL OLDER WORKERS

According to a report prepared for the 1981 White House Conference on Aging,[1] merely increasing the labor force rates of older men to 1970 levels (83 percent and 27 percent for males aged 55–64 and 65+ respectively) would, by the year 2005, increase the GNP by 4 percent, add $40 billion in new Federal, state and local tax revenues and provide an average annual increase in income to the elderly of $500 and to the near elderly of $1,050. The working elderly would receive an average increase in income of $6,000. The increase in labor force participation would also add $7.5 billion to the Social Security system because of the new payroll tax revenues and a reduction in benefit expenditures caused by delayed retirements. In addition, it would benefit employers, many of whom are already turning to older workers to fill gaps in the labor force caused by labor shortages. Thus, there is substantial evidence that increasing the number of older workers would have a positive impact on the economy, the Social Security fund and productivity.

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[1] Olson, Lawrence; Caton, Christopher; and Duffy, Martin. *The Elderly and the Future Economy*. Lexington, Mass.: Lexington Books, 1981.

What about the consequences for younger workers of retaining more older workers in the labor force? This report examines that issue, as well as the impact on women and minorities. The conclusion: the effect of raising the mandatory retirement age to 70 was negligible. According to the report,

> The estimated additional number of comparable age-65 workers are potenital competition for less than one-quarter of one percent of all full-time workers ages 16–24; less than one-half of one percent of all full-time black workers ages 16–59; and around one-tenth of one percent of all full-time female workers ages 16–59.

Eliminating mandatory retirement would, in fact, increase the rights of minorities and women, since members of these groups will also grow old. It would indeed be ironic if after years of struggling to gain their employment rights, monorities and women were to be denied these rights by the mere fact that they survive to old age.

A second concern often raised is that promotional opportunities for younger workers will be severely strained if older workers remain on the job longer. Again, the findings in the report refute this. According to a study cited by the report, a substantial increase (10 percent) in labor force participation rates of men over 65 would on average delay promotions at the highest ranks by one-half year, while at the lower ranks individual promotions would be retarded by 5 to 10 weeks. These are insignificant effects, especially when weighed against the harmful consequences of forced retirement based on age.

SUMMARY

The results of more than two and one-half years of study by the Labor Department indicate that removing employment obstacles facing older workers will increase labor force participation rates and, in turn, help refinance the Social Security system more compassionately than simply reducing retirement benefits. Recent legislation raising the mandatory retirement age to 70, when combined with the future elimination of mandatory retirement altogether and the removal of employment disincentives in present pension plans, would together add nearly one-half million older workers to the labor force by the year 2000. In contrast, a ten percent reduction in Social Security benefits would only increase labor force participation by 64,000, while at the same time placing a heavy economic burden on millions of elderly retirees.

The message of the Labor Department study is clear: unless obstacles to employment are removed, attempts to encourage older workers to delay their retirement will only add to the frustration already felt by these workers. The only "obstacle" to employment this Administration has chosen to eliminate is the Social Security earnings test, which may be a hollow gesture. The results of another study funded by the Labor Department, concluded: ". . . eliminating the earnings test will not increase labor supply but will increase the net cost to the government of Social Security pensions."[2] Thus, the Administration is proposing cutting Social Security benefits and eliminating the earnings test as the best way to increase the work efforts of older Americans and reduce the strain on Social Security. Ironically, neither proposal will achieve its intended effect, but both could further add to the problems of Social Security and its present and future recipients.

The absence of a coherent employment and retirement policy in this country leaves millions of older workers and retirees in a state of angry confusion over which way to turn. More than half of all retirees surveyed nationally have expressed a desire to be working in some capacity, and nearly half of all workers expect to work after retirement. The Labor Department's own figures cited in this report indicate that two-thirds of a national sample of workers plan to delay retirement if the current rate of inflation continues. Despite their desire to work and the economic pressures which force them to seek employment, older individuals are prevented from working by public policies that allow mandatory retirement and other disincentives to employment. Eliminating these disincentives will benefit all Americans.

CLAUDE PEPPER, *Chairman*.

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[2] Carliner, G. "Social Security and the Labor Supply of Older Men," final report (#DLMA-21-91-78-56) submitted to the U.S. Department of Labor, August 1980.

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EXECUTIVE SUMMARY

INTERIM REPORT

U. S. DEPARTMENT OF LABOR STUDIES ON THE EFFECTS OF RAISING THE AGE LIMIT IN THE AGE DISCRIMINATION IN EMPLOYMENT ACT

(Studies Required by Section 5 of the
Age Discrimination in Employment Act
of 1967 as Amended)

(1)

EXECUTIVE SUMMARY

I. Introduction

Background

The 1978 Age Discrimination in Employment Act Amendments (Public Law 95-256) required that the Secretary of Labor conduct an extensive study on the consequences of the new coverage provisions of the law including: (a) an examination of the effects of raising the upper age limit under the Act to 70; (b) a determination of the feasibility of further extending or eliminating the age-70 limit; and (c) an examination of the effects of the exemptions in the law permitting mandatory retirement of tenured faculty members at institutions of higher education and certain business executives. The law requires that the Department of Labor report study findings to Congress in an interim report in 1981. Also, a final report on the studies, including Departmental recommendations, is to be submitted in 1982.

In response to this requirement, the Department of Labor initiated in 1979 an extensive series of studies designed to produce information on the current and probable future consequences of the 1978 ADEA Amendments. Research findings from most of these studies are summarized in this interim report. These findings include information on the labor force participation effects of mandatory retirement, response of current workers and employers to the increased mandatory retirement age, long term projections of the consequences of mandatory retirement age alternatives, and the effects of the ADEA exemptions for tenured faculty at institutions of higher education and for executives. The interim report presents the most important research findings relevant to the major areas of Congressional concern: the effects of raising the upper age limit in the ADEA to 70; the feasibility of extending or eliminating the upper age limitation; and the effects of the exemptions in the law for tenured faculty members and certain business executives.

In conducting these studies, the Department of Labor was concerned with both the impact of mandatory retirement on individuals and the administrative and financial consequences of the ADEA for employers. In addition the Department recognized that the retirement decision is simultaneously influenced by mandatory retirement policies, public and private pension policies and personnel policies. Study findings examine the consequences of mandatory retirement policies in the context of these other major factors influencing retirement behavior.

The Age Discrimination in Employment Act Amendments of 1978 represent a substantial modification of the provisions of the Act by extending the upper age limit of protection under the Act to age 70 for most private sector and nonfederal public employees, prohibiting mandatory retirement of covered workers under employee benefit plans and extending age discrimination protection without an upper age limit to almost all Federal employees. In enacting these provisions, Congress was concerned about several potential consequences of the increased mandatory retirement age. The major areas of concern included: (1) the possibility of an adverse impact on employment opportunities for younger and minority employees resulting from large scale retention of employment by workers after age 65; (2) potential administrative burdens on employers; (3) possible cost implications for pension plans; and (4) possible difficulties for universities and major corporations in adjusting to the upper age limit of 70.

Demographic and Retirement Trends

Two trends which have developed over the past twenty-five years are of major significance in considering the potential effects of the Age Discrimination in Employment Act--population aging and the decline in labor force participation by older workers.

Under intermediate demographic assumptions, the 65 and over population will increase from 25 million in 1980 (11 percent of the total population) to 32 million in the year 2000 (13 percent of the total population). The median age of the population which was 28 in 1970, is now 30 and will continue to increase. Contributing to population aging is the gradual increase in life expectancy at older ages; medical advances in the future could result in even greater life expectancy leading to higher proportions of older persons in the population. These trends will result in a gradual aging of the labor force in the years ahead.

While the overall population continues to age, labor force participation by older workers has declined significantly over the past twenty-five years. For men 65 and over, labor force participation reached a new low of 19.3 percent in 1980 (28.5 percent of men 65-69 were labor force participants however). Declining participation was also occurring for men 55-64 and 45-54 years of age. Labor force participation by older women has been low but stable for many years.

It is generally agreed that the increasingly earlier availability of Social Security and private pension benefits and the continuation of mandatory retirement practices have led to the development and continuation of the early retirement trend and substantially lowered the labor force participation of older workers. A continuation of this trend will have two major consequences: (a) a substantially increased retirement financial support burden for a smaller workforce; and (b) fewer oppportunities for older persons to remain employed because of institutionalized early retirement practices, pension programs and mandatory retirement rules. Declining labor force participation by older workers is of considerable concern since (1) the economic position of retired persons will be significantly affected with longer periods of retirement and continued inflation; (2) early retirement increases the financial strain on Social Security and private pension programs; (3) shortages of skilled labor could develop in certain industries and geographichal areas; and (4) older person's preferences for part-time employment are growing but labor demand is not sufficient to satisfy their employment needs. For these reasons, the potential for reversing the decline in labor force participation and raising or eliminating the mandatory retirement age have become major public policy issues.

Estimated Number of Employees Within Scope of the ADEA

An estimated 73 million workers of all ages are employed by employers having 20 or more employees and are, therefore, covered by the Age Discrimination in Employment Act. The exact number of these workers who are in the 40-70 year old group protected by the Act is not known. However, labor force data show that of the 104,720 million persons 16 years of age and older who were in the civilian labor force in September 1980, 39 percent were 40-70 years of age. Applying this proportion to the estimated 73 million persons employed by covered employers, yields an estimate of 28 million persons covered by the ADEA or 7 out of every 10 persons aged 40-70 in the civilian labor force.

II. Organization of Research Findings

The Studies undertaken by the Department of Labor provide information directly relevant to the research requirements specified in the Age Discrimination in Employment Act Amendments of 1978. The findings are organized as follows:

Part I. Effects of the 1978 ADEA Amendments on Employee Retirement Plans and Employer Personnel and Pension Policies

Part II. Effects of Mandatory Retirement on Younger Workers

Part III. Long Term Effects of Mandatory Retirement Policy Options

Part IV. Impact of the Exempt Executive Provision in the 1978 ADEA Amendments

Part V. Effects of the Tenured Faculty Exemption in the 1978 ADEA Amendments

Part VI. Continued Existence of Mandatory Retirement Rules, Consequences of Mandatory Retirement Rules on Labor Force Participation by Older Workers, Estimates of Response by Older Workers to Change in the Mandatory Retirement Age

PART I.

EFFECTS OF THE 1978 ADEA AMENDMENTS ON EMPLOYEE RETIREMENT PLANS AND EMPLOYER PERSONNEL AND PENSION POLICIES

The study has examined nine major areas through conducting major national surveys of employees, employers and pension plan sponsors:

- What factors influence an employee's planned age of retirement?

- How do employees' retirement plans change when an age-65 retirement policy is extended to age 70 or lifted altogether?

- How accurate is employee knowledge about their own firm's retirement policies, the federal ADEA Amendments, and (where applicable) state mandatory retirement laws?

- How have firms modified their mandatory retirement policies in response to the ADEA Amendments?

- Why are mandatory retirement policies important to firms?

- What was the pre-Amendment pattern of retirement behavior? And what retirement incentives were offered at the time of the survey?

- How have firms modified their benefit, personnel, and other retirement policies in response to the ADEA Amendments? What modifications are contemplated in the future?

- Do firms believe that employees will delay their retirement plans because of the ADEA Amendments? And what, if any, policies will firms change to counteract this trend?

- What do employers believe the impact would be, should a large number of older workers postpone retirement to age 70? And what, if any, policies firms would change in that event?

The Short-Run Impact of the ADEA Amendments

In assessing the impact of the ADEA Amendments, it is useful to separate the short-run and long-run effects. In the short run, the Amendments had their most direct impact on the behavior of firms--particularly firms' mandatory retirement policies--and a much smaller impact on the plans of employees. In the long run, this balance may be reversed.

We estimate that in the mid-1970's, about 60 percent of persons surveyed had faced some mandatory retirement age. By the time of the survey itself (early 1980), 51 percent of the sample faced a mandatory retirement age of 70 or more while 45 percent of the sample faced no mandatory retirement age whatsoever.

Fifty-three percent of employees sampled in the survey worked for firms that had changed their retirement policies "in the last few years". In almost all cases, (82 percent) these changes have arisen in whole or in part from the ADEA Amendments. Most of these recent changes attributed to the Amendments involved moving from one mandatory retirement age to a higher one, while relatively few changes involved abandoning a mandatory retirement age altogether. This reaction suggests that by the late 1970's, most employers who retained mandatory retirement policies did so by conscious choice.

The Amendment's short-run impact on other aspects of firm behavior was relatively weak. For example, it has often been asserted that a relaxation of mandatory retirement age would result in a more widespread use of performance evaluations as an alternative way of removing people from jobs. The survey suggests, to the contrary, that the incidence of performance evaluations was already highest in firms that have mandatory retirement rules, those with such rules were no more likely to have stricter evaluations in the future. Thus, the two policies serve as complements, rather than substitutes, for each other.

It was also anticipated that firms would discontinue pension accruals for workers over age 65. However, only 6 percent of employees currently permitted to continue accruals have employers who would suggest such a move.

Although at least half the short-run changes in employer policy had been made by the time of the survey, the results suggest that nearly all the employer response has been, and will be, in the direction of providing more encouragement for employees to retire by liberalizing existing benefits, adding types of benefits, and shifting costs more toward the company.

The ADEA Amendments' short-run impact on employee retirement plans was very weak, a conclusion that arises from several pieces of data. First, only 15 percent of the survey respondents could correctly identify the Amendments' barring of mandatory retirement before age 70. By itself, this data means little since the ADEA Amendments might be affecting persons indirectly through changes in firm policy. But in practice, only 11 percent of the sample report having made a recent change in their retirement plans for any reason. About one-third of these actually decreased their retirement age and only one-tenth of these increased their retirement age explicitly because of the ADEA Amendments.

Finally, the survey contained an "experiment" to see whether people would change their planned retirement age upon being informed of the ADEA Amendments' details. In this experiment, about 8 percent of the respondents did increase their retirement age from 65 or less to 66 or more. But an equal proportion of the sample decreased their retirement age. And a person's increase or decrease in planned retirement age had nothing to do with whether the person thought he faced mandatory retirement at 65, mandatory retirement at 70, or no mandatory retirement whatsoever.

These data are consistent with the idea that most people have devoted at least some prior thought to retirement and their plans are based on their conceptions of their employers' policies. While these plans may change in the long run, they will not be changed immediately by being informed of the new age 70 mandatory retirement provision.

In summary, the ADEA Amendments had a significant impact on increasing the mandatory retirement age of some firms, but it had a relatively small impact on other aspects of firm behavior, and it had only a very limited impact on employees' retirement plans.

The Long-Run Impact of the ADEA Amendments

In the long run, the impact of the ADEA Amendments on employee plans may be somewhat larger and this, in turn, may induce employers to change their policies. Our analysis of the retirement plans of men showed significant differences between men who believed they were covered by an age-65 retirement rule and men who faced a retirement rule at 70 or above. On average, the second group retired two years later than the first with one quarter of the cohort wanting to retire at age 66 or age 67. Over time, as all men became aware that they can work to age 70, we would expect retirement dates to be delayed. (We do not expect this to happen for married women since their retirement decisions appear to be planned jointly with their husbands and those women are, on average, two years younger than their husbands).

For the present, most employers expect little change in employee retirement behavior, either because that behavior is governed by continuing financial incentives, or by expectations (rather than mandatory retirement rules). But should retirement ages increase, the most common employer respose will be to increase retirement incentives.

The picture could change dramatically should other major changes in federal retirement policy occur, such as raising the Social Security retirement age. It is not at all clear whether employers interested in controlling retirements will accept the resulting older retirement ages, or will assume the cost of replacing all or part of the lost Social Security benefits with supplemental payments.

Analysis of the surveys is divided into two parts. The first part examines the impact of raising the mandatory retirement age on employees' planned retirement ages. The second part examines the impact of raising the mandatory retirement age on the behavior of firms.

Analysis of Employee Retirement Plans

In this section, the survey data are analyzed to measure the impact of the 1978 ADEA Amendments on employee retirement plans.

Principal findings are as follows:

- Men who believe they face an age-65 retirement policy plan to retire, on average, at age 62. Had the same men faced a retirement policy of age-70 or above, we estimate that they would have planned to retire, on average, at age 64.

- When men are faced with an age-65 retirement policy, we estimate that by the time they reach age 59, about 4 percent of the cohort will want to retire at age 66 or higher. Had the same men faced a retirement policy of age-70 or above, about 24 percent of the cohort would have wanted to retire at age 66 or higher and most of these would have retired by age 68.

  When married women are faced with an age-65 retirement policy, we estimate that by the time they reach age 59, about 1 percent will want to retire at age 66 or higher. Had these same women been faced with a retirement policy of age-70 or above, about 5 percent would have wanted to retire at age 66 or higher. This relatively small impact arises in part from the fact that women key their retirement decisions to the decisions of their husbands and women are, on average, about two years younger than their husbands. This means most couples will retire at an age that will not bring the wife into contact with a 65-year old limit.

- In practice, 10-15 percent of all sample respondents knew of the existence of a Federal law which moved the mandatory retirement age from 65 to 70.

- Employees were much more aware of the mandatory or expected retirement ages in their firms. In firms that had had no recent change in retirement age policy, 57 percent of men and 48 percent of women correctly identified the firm's retirement age (or the absence of any retirement age) while 10-15 percent of both groups did not know their firm's policy and 20 percent of both groups identified a policy that was too restrictive. In firms that had made a recent policy change (within the last year), about 35 percent of men and 26 percent of women could correctly identify their firm's policy while about 30 percent of both groups identified a policy that was too restrictive.

- When sample respondents were informed of the 1978 ADEA Amendments, only about 8 percent chose to change their retirement age from 65 or less to 66 or more. An equal number chose to reduce their planned age of retirement while about three-quarters of all respondents left their planned retirement age unchanged. We believe this result indicated that retirement plans are not something people will quickly change in an interview format. Over time, we expect results to be somewhat larger.

Analysis of Employer Responses to the 1978 ADEA Amendments

This section addresses the impact of the 1978 ADEA Amendments on employer retirement policy by analyzing survey data collected from older workers' personnel officers and pension plan sponsors. Given the limited direct impact of the Amendments and the relatively stronger influence of financial variables on employee retirement plans, most of the near term effects of the Amendments are likely to be felt indirectly through employer policies.

Employees co-workers were bound to be retiring relatively early, on average, particularly if they were subject to an age limit. Among those subject to an age limit, 43 percent had persons in their occupation retiring by age 61, 63 percent by age 62, and 79 percent by age 64, on average. Few changes were expected in that pattern over the near term and only 7 percent of the older workers subject to an age limit were expected to have co-workers retiring at ages older than 65. The relatively early retirements were in response to substantial financial incentives to early retirement offered by employers, including pension plans with young normal retirement ages, payment of full accrued early retirement benefits, and continuation of company-paid insurance after retirement. There appeared to be little reason for employers to alter their policies in the short term.

A number of policymakers have expressed concern that large numbers of employers who currently permit continued pension accruals (about 55 percent of our sample), would discontinue them subsequent to the passage of the ADEA Amendments. The findings from this study suggest that the employers of very few older workers (6 percent) would even recommend that the firm consider such a move.

Another major area of concern during consideration of the Amendments was the potential impact on formal performance evaluations. It has been argued that mandatory retirement rules serve as a substitute for effective performance evaluations, which protects both employers and employees from the risks of declining productivity that may occur with age.

If indeed mandatory retirement rules did substitute for effective performance evaluations, it was feared that increasing the age, or eliminating mandatory retirement, could lead to stricter evaluations of performance at all ages, with the unintended consequence that more older employees would be dismissed before retirement. The findings of this study suggest that formal performance evaluations, rather than acting as a substitute for a mandatory retirement policy, more often operate in conjunction with one. Employees subject to mandatory retirement and formal performance evaluations were no more likely than those subject only to performance evaluations to have to have evaluations made more stringent in the in the near future.

The other major argument against raising the age limit mandatory retirement was that age limits were needed to assure jobs and promotional opportunities for younger workers. Employers of workers subject to an age limit did believe that mandatory retirement rules were more important in this regard than as a simple way to remove unproductive older workers.

Although approximately 50 percent of workers' employers believed the cost of labor would increase if significant numbers of older workers postponed retirement to age 70, the employers of workers subject to an age limit were four times more likely to believe costs would decrease as other employers. A surprising 21 percent of workers in manufacturing firms subject to an age limit, and 34 percent in the largest firms had employers believing costs would decrease.

Give the relatively young current retirement ages, little expectation that retirement ages will change, substantial offerings of incentives to early retirement, and policy changes already accomplished, relatively few older workers can expect additional changes in their pension or health and welfare benefits in the near future. If personnel officers' and plan sponsors' suggested recommendations for change were implemented, existing benefits would be liberalized, new types of health/welfare insurance coverage would be provided, or costs would be shifted more toward the company. However, less than half the recommendations for changing pension benefits were actually under active consideration by the organization, and fewer than 30 percent of the recommendations were being considered as a result of ADEA. The short-term impact of ADEA on employee benefits thus appears to be quite limited.

Summary of Major Findings

In terms of the number of older workers affected, the greatest impact of the ADEA Amendments was on employers' mandatory retirement rules. Forty-four percent of the employees were subject to new mandatory retirement policies as a result of the Amendments, and an additional 9 percent had policies changed for other reasons. The great majority (87 percent) of the changes attributed to ADEA involved retaining mandatory retirement with an older age limit. Only 6 percent of all older workers had their age limit removed as a result of ADEA. Nearly all employers responded to the legal mandatory retirement age permitted by the Amendments. Most of the employees experiencing no recent change in employer policy had been subject to no age limit since 1976, and nearly all of the remainder had been subject to age limits of 70 or older prior to the Amendments. Although the impact on employer's mandatory retirement policies was found to be quite large, the corresponding impact on other retirement-related benefits and policies was found to be of a much smaller order of magnitude.

It is significant that at least half the potential impact of the Amendments on employer policies had already been felt by the time the survey data were collected (early 1980).

Employers, especially those retaining an age limit, were offering their workers substantial incentives to encourage retirement before the normal retirement age, including full accrued early retirement benefits, continuation of health, life and disability insurance after retirement, and retirement counseling.

Employers were asked whether the average retirement age was expected to change in the next few years. Sixty-four percent expected no change in the average retirement age for the employees'ocupation. When change was expected, twice as many employers expected workers to delay retirement as retire earlier, but only 7 percent expected the average retirement age to exceed 65.

Given the policy changes already accomplished, the substantial inducements to early retirement, the relatively young retirement ages, and the general anticipation that employees would not change their recent retirement behavior, one would expect few additional changes in pension or health and welfare benefits. The findings confirm this expectation and nearly all of the recommendations involved either increasing benefit amounts, adding types of coverage or shifting costs more to the employer.

When pension plan sponsor's recommendations were compared to the reason why policy changes were being actively considered or planned, ADEA was found to be responsible, even in part, for very few of the likely benefit adjustments in the near future. Consequently, the impact of ADEA on employee's retirement benefits in the near future is expected to be quite limited.

When employers and pension plan sponsors were asked what policy change they might recommend that their organizations consider should a large number of older wokrers postpone retirement to age 70, the response was again overwhelmingly in the direction of providing more generous benefits. While it was feared that employers would discontinue pension accruals for workers over age 65 in response to the Amendments, the results did not confirm this expectation.

Despite the inducements offered to encourage early retirement, the relatively young retirement ages and the anticipation that very few employees would postpone retirement beyond age 65, the employers retaining their age limits believed that mandatory retirement rules were important. However, these employers believed age limits were more important as a way to assure promotional opportunities than as a simple way to remove unproductive older workers.

Conclusion

The major short-term impact of the 1978 ADEA Amendments was to force employers to raise their mandatory retirement age limits. There has been relatively little change in other retirement related policies, and there will probably be little in the near future due to ADEA. Most changes were being made in response to other factors. Rather than attempting to mitigate the potential effect of the Amendments, most employers appeared to be waiting to see whether, and how, employees' retirement behavior will change before they alter policies.

If retirement ages increase precipitously, employers might be faced with the choice of making major structural changes in their system of personnal management, or spending large sums of money to pay retiring workers supplemental benefits until they are old enough to qualify for Social Security benefits.

If retirement ages increase more slowly, the outcome is more likely to be determined by other factors such as the rate of growth in the economy, and the unemployment rate. The total long-term impact of the Amendments on employee behavior and employer policies will likely be determined largely by changes in other Federal retirement policies and future economic performance.

PART II.

EFFECTS OF MANDATORY RETIREMENT ON YOUNGER WORKERS

Summary

An analysis of census survey data was undertaken to assess the maximum immediate impact on younger workers resulting from any direct competition for jobs held by age-64 workers who might elect to remain in the labor force past 65 due to the increase in the mandatory retirement age. The possible job competition was assessed for youth, women and black workers who hold full-time, full-year jobs at wage levels comparable to the older workers. The logic behind the analysis was that any short-term effect on these groups will result from a substantial number of older workers who hold jobs comparable to these other workers continuing to work longer than they would have in the absence of the change in mandatory retirement age.

The immediate effect of the 1978 Amendments on younger, female, and minority workerss based on estimates of the direct effect on older workers was found to be small. The estimated additional number of comparable age-65 workers are potential competititon for less than one quarter of one-percent of all full-time workers ages 16-24; less than one half of one percent of all full-time black workers ages 16-59; and one tenth of one percent of all full-time women workers ages 16-59.

In all three comparisons (younger workers, black workers, and women workers) with older workers, the wage-comparable younger workers were concentrated in manufacturing, professional services, and wholesale and retail trade, while the wage-comparable older workers expected to work past age 65 were concentrated in manufacturing, professional services, and public administration. When these wage-comparable workers were compared, the potential for significant job slot competition within specific industries did not materialize. The general pattern was that apparent high levels of potential competition within certain industries tended to result, on closer scrutiny, from potential competition between workers in only a few particular occupations. The greatest potential for job slot competition was not in occupations with the greatest number of wage-comparable younger workers but in the occupations with the highest ratio of wage-comparable older to younger workers, such as: craft workers for all younger workers; managers, craft workers and laborers for younger black workers; and transportation operatives, laborers and craft workers for younger female workers. However, the magnitude of the competition is still very small, representing no more than four percent of the pool of comparable younger workers in any occupation.

The focus of this analysis was full-time workers; however, some insight can be given to the impact of the change in mandatory retirement age on part-time workers. Although the data show relatively large numbers of younger and older workers in part-time employment, no additional competition is anticipated to result from the change in mandatory retirement rules. Indeed, to the extent that workers who stay in full-time work past age 65 would have taken part-time jobs at that age, competition for part-time work would be lessened by the new mandatory retirement age.

As a result of this analysis, it would seem that such labor market concerns as youth unemployment and affirmative action are not likely to be worsened by the change in mandatory retirement age. Few older workers are projected to continue to work past age 65, and those that are likely to continue to work represent potential competition for a very small number of younger, female and black workers.

PART III

LONG TERM EFFECTS OF MANDATORY RETIREMENT POLICY OPTIONS

Summary

Methodology. This section describes research on the long-run labor supply effects of alternative mandatory retirement policies. Estimates of changes in the labor force participation of older workers were projected to the year 2000 for three policy options: (1) the old law (age-65 mandatory retirement); (2) the current law (age-70 mandatory retirement); and (3) a policy that prohibits employers' use of mandatory retirement. In addition, the sensitivity of these estimates was tested to two possible changes in retirement benefits: (1) across-the-board reductions in Social Security benefits; and (2) larger benefits under employer-provided pensions when retirement is delayed past the normal retirement age.

Estimated effects of changes in labor force participation rates are based on a retirement decision model developed for use by the Department of Labor in estimating the effects of mandatory retirement age on employment. This model was applied to data for a sample of 60,000 persons from the 1973 Current Population Survey and matched Social Security Earnings Records. The projections to the year 2000 involved use of dynamic simulation techniques which take into account expected changes in demographic and economic characteristics of individuals as they age and compute entitlements to Social Security and employer pension benefits. The retirement decision model--which takes into account individuals' Social Security and pension wealth and mandatory retirement constraints as well as age, wage rate, health status and other variables--was applied to estimate the labor force participation of persons between ages 60 and 70 for three points in time (1985, 1990, and 2000).

Effects of Increase in Mandatory Retirement Age to 70. The estimates indicate that labor force participation of older men* should rise as a result of the 1978 ADEA Amendments raising the mandatory retirement age from 65 to 70. Slight increases in the participation rate were forecast for older men under age 65.

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*The effects in this summary apply to older men. Underlying problems with the data used in the retirement decision model for women preclude attributing the same degree of validity to the estimated effects on women.

The most significant impacts on older workers remaining in the labor force were found for those age 65 and over. In all three years (1985, 1990, 2000), men age 65-67 were estimated to experience a participation rate increase from about 33 percent to about 40 percent, a rise of more than one fifth. For men age 68-70, a significant increase was also found, although the pattern was not as uniform. In 1985 the participation rate is estimated to rise from 17.6 to 22.0 percent, an increase of one fourth. In 2000, however, the rise is only by about five percent, from 18.9 to 19.8 percent. This difference over time results from the interaction of mandatory retirement policies with trends in Social Security and pension wealth for this age group, with the retirement benefit effects becoming stronger than mandatory retirement for 68-70-year-olds.

The change from age-65 to age-70 mandatory retirement will result in approximately 217,200 more older men being in the labor force in 2000. The bulk of this increase is in the 65 to 67 age range.

Effects of Eliminating Mandatory Retirement. As in the policy changes described above, moving from the current age-70 mandatory retirement policy to a situation in which mandatory retirement is prohibited affects, but only modestly, older men who are not yet at the mandatory age. However, for the age bracket that includes age 70 (the 68-70-year-old men), the participation rate rises sharply, from 22.0 to 27.8 percent in 1985, a 26-percent increase, and from 19.8 to 23.9 percent in 2000, a 21-percent increase.

Compared to the age-70 policy, elimination of mandatory retirement would result in 195,100 additional older men being in the labor force in 2000. Almost half (90,300) are in the 68-70 age group. If added to the 217,200 estimated rise in the labor force size caused by the increase in the mandatory retirement age from 65 to 70, eliminating any mandatory retirement age would induce 412,300 men to remain in the labor force in 2000. This number constitutes about *10 percent* of all male workers age 60-70 estimated for that year.

Sensitivity of Labor Supply Effects to Changes in Retirement Benefits. Since Social Security and employer pension entitlements are among the most important factors in the retirement decision, the labor supply estimates associated with different mandatory retirement policies were reestimated under three assumed changes in retirement benefits: (1) a 10-percent across-the-board reduction in Social Security benefits; (2) a 20-percent Social Security reduction; and (3) an increase in pension benefit accruals for delayed retirement that is closer to an actuarially fair accrual rate than assumed in the simulation model. These sensitivity tests reflect current policy concerns regarding the need to contain Social Security costs and the desire to encourage delayed retirement.

The estimated effects of the Social Security reductions on the labor force participation rates of older men were small in size and inconsistent in direction. The principal conclusion of this analysis is that marginal changes in Social Security entitlements have quite different implications for workers at different ages in terms of the financial desirability to them of continuing to work and accrue additional Social Security coverage and earnings credits. The estimates done in this study point to the need for more analysis of the likely impacts of future Social Security benefit changes on labor force participation and on the fiscal status of the Social Security Trust Funds.

The adjustment to employer pension benefits for delayed retirement that was analyzed assumed that all plans provided a 10-percent increase in accrued benefits for each year worked after the normal retirement age (or 5 percent for plans with normal retirment ages younger than 65). This adjustment is more generous than that assumed to exist currently in the majority of plans.

The more generous pension adjustment would serve to increase labor force participation both under the age-70 mandatory retirement policy and under a prohibition of mandatory retirement. It was estimated that, if pension plans were revised to encourage later retirement, the number of men age 60-70 in the labor force in the year 2000 would increase by 49,100 in the age-70 mandatory retirement case, and by 67,700 with no mandatory retirement.

Conclusions. Several important conclusions may be drawn from these projections of the labor supply effects of alternative mandatory retirement policies. First, the rate of increase of the downward trend in the labor force particpation of older men that has prevailed for two decades should be reversed, at least temporarily, by the 1978 ADEA Amendments unless other more powerful economic forces offset the effects attributable to the new age-70 mandatory retirement policy. However, the long-term decline in older men's labor force participation should resume in the mid- to late-1980's absent other significant policy change or economic trends that depart sharply from previous long-run experience. Elimination of mandatory retirement would constitute such a policy change, and in this case the projections found that older men's labor force participation would rise not only immediately after enactment of such a policy but would also continue to rise slightly over the longer run.

A second conclusion is that the order of magnitude of the increase in the workforce that should result from the age-70 policy (a 5-percent increase) found in other studies was confirmed here and found to apply even when viewed over a long period of time.

Third, the total elimination of mandatory retirement would have a similar impact (a 5-percent increase) on the male workforce when compared to the labor force participation expected under the age-70 policy. Taken together, the 1978 Amendments and further Congressional action to eliminate mandatory retirement would add 412,300 men age 60-70 to the labor force. Thus, elimination of mandatory retirement, while helpful to employment aspirations in thousands of individual cases, would be expected to have a marginal impact on the overall labor force that is no greater than the impact of setting the age at 70 vs. 65.

Finally, targeted pension adjustments such as an increase in the rate of benefit accruals for delayed retirement can be expected to increase older workers' labor force participation, but other reforms, such as an across-the-board cut in Social Security benefits, should not a priori be assumed to stimulate a delay in retirement simply by virtue of constituting a reduction in available retirement income.

PART IV

IMPACT OF THE EXEMPT EXECUTIVE PROVISION IN THE 1978 ADEA AMENDMENTS

Summary

Two years after the 1978 ADEA Amendments became effective, a survey of the personnel officers of nearly 3,000 firms and an in-depth case study of 50 of the firms revealed a great deal of indecision and confusion surrounding firms' use of the authority left them by Congress to exempt executives from the increased mandatory retirement age. Although 20 percent of all personnel officers indicated that their firms either were using the exemption or were planning to apply it within a year, nearly 30 percent said their firms' executives must retire before reaching age 70. About a fifth of the larger sample and a third of the case study firms had not made final decisions about whether to apply the exemption.

Larger firms and those engaged in manufacturing were more likely to use the exemption than other firms. Seventy-five percent of the executives eligible for exemption work for firms already using it, and personnel officers expected only a 3-percent increase in the numbers of eligibles over the next 5 years.

The main reason given by nearly half of the case study respondents for using the exemption was the need to assure promotional opportunities for younger workers; cost savings were also frequently cited.

Although the majority of firms (60 percent of the case study sample and 80 percent of the larger sample) were not using the exemption at the time of the survey, case study responses indicate that executive retirement age was not an issue for these firms. The firms either had no older executives, their executives were retiring by age 65, or there was no policy encouraging retirement at a specific age.

Approximately half the non-exemption case study firms expected their policy to continue, and the remainder had made no final decision. Future adoption of the exemption by these firms will depend on the retirement behavior of the executives themselves. The recent performance of the national economy and the high inflation rate were expected to have more effect on executive retirement decisions than increases in the mandatory retirement age.

In general, the effect of the exemption has been to permit a partial retention of the old retirement age policy for those firms that have the organizational capability to administer a complex policy (the larger firms) and that have the least growth in executive positions (the manufacturing firms) and thus the greatest pressure for turnover in jobs. Large firms and the manufacturing sector have traditionally been more likely to apply mandatory retirement and pension incentives to their older employees as a part of personnel policy.

PART V

EFFECTS OF THE TENURED FACULTY EXEMPTION IN THE 1978 ADEA AMENDMENTS

Summary

This section of the report examines the impact on higher education of the exemption for tenured college faculty members from the mandatory retirement age provisions of the 1978 Amendments to the Age Discrimination in Employment Act.

The major questions given attention are: (1) What are the origins and impact of longstanding mandatory retirement age policies in higher education? (2) What are the attitudes of faculty members and administrators to retirement and to alternative policies with respect to the age of mandatory retirement (including the current exemption and its expiration)? (3) What are the likely direct effects of different policies on mandatory retirement age (including the exemption and the expiration)? and (4) What are the likely adaptations by the higher education sector to the direct effects of these policy changes?

In attempting to answer these questions, several approaches are followed, including examining existing knowledge and data, analyzing the results of two specially designed surveys developed for this study, several models of institutional and faculty behavior, and simulations of effects over the next several decades of continuing the exemption versus allowing it to expire in 1982.

1. Problems and Prospects Facing Higher Education

The impact of a mandatory retirement age change will depend in part on the adjustments made by institutions and their faculty members to other problems facing higher education during the next decade. Thus, it is important that these other issues are understood and considered when the likely effects of a change in the mandatory retirement age are examined.

a. Enrollment Changes in the 1980s. The projections for the 1980s give a mixed picture, with some experts predicting declines in enrollments while others foresee increases. Much of the variation hinges on the growth of what are called non-traditional students, since the potential for enrollment growth from the traditional college age population is limited because of declines in birth rates during the late 1960s and the 1970s. The rising demand for higher education by persons beyond the age of typical college students and for continuing education and training could, if strong enough, offset the drop in demand from the college age population. The net result is not yet clear, however, and this accounts for the great uncertainty about the impact of enrollment changes on the demand for faculty members in the 1980s.

The import of prospective enrollment declines should be clear. In an era of growth it will be easier to accomodate the expiration of the mandatory retirement age exemption because institutions might not need to significantly reduce their rate of hiring of new young faculty members. If no enrollment growth is likely, this will force more substantial reductions in new hires until a new stable pattern of retirements emerges in response to the end of the exemption. If enrollments actually decline significantly, layoffs of already-employed faculty may be required to accomodate these declines. Whatever happens, certain types of institutions, namely the four-year liberal arts colleges, will continue to be heavily dependent on the tradidtional college student population for their enrollments. Hence, they are most likely to be adversely affected by enrollment declines.

b. Aging of Faculty Members. The aging of faculty members is almost inevitable, given the extensive hiring of new faculty members to staff the enormous expansion of higher education in the 1960s, the slower growth of the early 1970s, and the minimal growth projected for the 1980s.

c. Financial Constraints. The tightened financial situation for higher education--both for private institutions dependent on private donations and endowments and for the larger public sector institutions directly affected by tax changes and spending cuts--will reduce its ability to adapt to changes of any kind, including changes in the age of mandatory retirement.

d. The Impact of Inflation. The inflation rate is almost certain to affect faculty decisions about retirement because the real salaries of faculty members have declined by 15-20 percent over the past decade and this reduction is reflected in reduced pension benefits.

e. Health and Expected Retired Life of Faculty Members. Faculty are a longer-lived and healthier group than is the general population. The death rates and expectation of life of older faculty members are considerably lower and higher, repspectively, than for the general population. Thus, faculty members are much more able to continue working beyond age 65 than is the case for other workers.

f. Trends Toward Earlier Retirement by Faculty Members. Despite forces that would seem to cause faculty members to delay retirement, there is evidence that faculty members are retiring at progressively earlier ages. This may be due to increased pension benefits as well as the trend toward earlier retirement in the rest of the population.

2. Background Information.

a. Evolution of Mandatory Retirement and Pension Practices

The evolution of mandatory retirement in higher education is closely connected to the history of pension plans. The discussion focuses on the evolution of state public retirement and TIAA-CREF plans that cover over 90 percent of all faculty in the national faculty survey.

The development of pensions and associated mandatory retirement age policies in higher education reflects the public-private division of this sector. Public institutions covered by State pension plans have historically had a later mandatory retirement age than have private institutions.

b. The Meaning and Evolution of Academic Tenure

The development of academic tenure was based on the desire of academic institutions to protect the academic freedom of faculty members, i.e., their ability in their teaching to deal with controversial issues without fear of losing their jobs. Thus, the costs imposed on higher education by tenure rules have been accepted as necessary to achieve another outcome, namely academic freedom.

c. Changes in State Legislation Since the Passage of the ADEA

Changes since 1978 in State legislation covering mandatory retirement age are detailed. Most changes have raised the State minimum mandatory retirement age to conform with the Federal law, with many States including a faculty exemption. Unless States move to amend their laws further, the expiration of the ADEA faculty exemption will have an immediate impact on the legality of mandatory retirement provisions within the great majority of States. In all but a few States, Federal law must be considered the binding constraint on an institution's ability to adjust their mandatory retirement age policies.

d. Attitudes of Administrators and Faculty Members

Prior information on the attitudes of administrators and faculty members toward the exemption is rather limited. A 1979 study by the American Council on Education indicated strong opposition to uncapping the age of mandatory retirement as well as considerable concern about shifting to age 70 after expiration of the exemption for tenured faculty members. Half the institutions said they planned to make use of the exemption; most of the remainder could not do so because they already operated with a mandatory retirement age of 70. Two-thirds of the institutions indicated they would favor making the exemption a permanent one, with the strongest support for this position coming from the private institutions. Tenured faculty members aged 50 and above, as shown by our current survey, were strong in their opposition to continuation of the exemption with 70 percent favoring the lapse of the exemption. A somewhat smaller majority of 60 percent favored complete uncapping of the age of mandatory retirement.

4. Results From Survey of Educational Institutions

a. Mandatory Retirement Provisions Prior to ADEA Amendments. Prior to the 1978 ADEA Amendments, 79 percent of responding institutions had some age of mandatory retirement. Almost 70 percent of these institutions set this age at 65; and 19 percent had a mandatory retirement age of 70 or over. Another 6 percent had an age of 66-69 and 5 percent did not specify their mandatory retirement age. The public-private division is clear with only 41 percent of public universities setting an age of 65 compared to 70 percent of private universities. At that time, about half of all full-time faculty members were employed in institutions with a mandatory retirement age of 65.

b. Changes Prompted by ADEA Amendments. Almost 30 percent of responding institutions have made some change in their mandatory retirement age since January 1, 1976. These changes took place primarily among public institutions. Only 27 percent of all private institutions with a mandatory retirement age below 70 made changes as contrasted to 55 percent of similar institutions.

c. Mandatory Retirement Provisions in 1980. As a result of these changes only 36 percent of public institutions had a mandatory retirement age of 65 at the time of the survey compared to 61 percent prior to 1978. The percentages for the private sector are 57 and 78 percent, respectively. At the time of the survey one-third of all full-time faculty members were employed in institutions with a mandatory retirement age of 65. Half were covered by age 70 mandatory retirement age while 13 percent were not subject to

mandatory retirement. The percent subject to a mandatory retirement age below age 70 had fallen from 69 to 35 percent since the passage of the ADEA Amendments. While the percentage of faculty not subject to a mandatory retirement age has doubled, only a small fraction (13 percent) remain in institutions without mandatory retirement provisions.

Thus, although the expiration of the exemption may be important for particular types of institutions, it wil affect only about a third of all full-time faculty members. However, raising the age of mandatory retirement above 70 or its elimination altogether will force an alteration in policies covering most of higher education-87 percent of faculty members and 76 percent of institutions.

d. Compulsory versus Mandatory Retirement. Most institutions allow extensions of employment beyond the stated mandatory retirement age at the discretion of the administration. While not granted to all faculty members, such extensions provide flexibility to faculty members and their institutions. Only 4 percent of all institutions report that retirement is compulsory at age 65. Of the 34 percent of institutions with a mandatory retirement age of 65, less than 10 percent also have compulsory retirement at that age.

e. Age Distribution of Faculty. Most striking is the broad similarity in the age distribution of faculty age 45 and over across different types of institutions. While no particular type of insitituion is uniformly confronted by a particularly old or young faculty, a few institutions within each group will be faced with the possibility of adjusting to the changed retirement plans of a large proportion of their faculty members--those now approaching normal retirement age. Thus, targeting policy on a particular type of educational institution defined by size, control or type, will not alleviate the difficulties faced by those institutions with an older age structure.

f. The Effect of a Mandatory Retirement Age on the Probablility of Retiring. We examine for each institution the probability of a cohort of faculty aged 60 retiring prior to reaching their 66th birthday.

Retirement probabilities do not differ using the 1980 mandatory retirement age in the public sector, but they do differ in the private group. However, if the pre-1978 mandatory retirement age is considered, probabilities of retirement are 10 percentage points higher with a 65 mandatory retirement age than with an older mandatory retirement age in both public and private institutions. There is no correlation between probability of retiring and a current mandatory retirement age of 65. However, the combination of a mandatory retirement age and employment extension policies result in a higher probability of retirement.

Substituting for the current mandatory retirement age the institution's mandatory retirement age prior to 1978 resulted in a significant and positive effect on retirement probabilities (Persons facing an age 65 mandatory retirement limit were more likely to leave employment than those not facing this constraint). We conclude that retirement plans were made by faculty members retiring in 1979 based on the mandatory retirement age in effect at the time these plans were finalized. A change in the mandatory retirement age just prior to their expected retirement date failed to change the plans of most faculty members. Thus while the current often higher mandatory retirement age has little effect, the presence of a mandatory retirement age was a significant factor in the retirement planning of recent retirees, suggesting that the current mandatory retirement age will affect the retirement plans of faculty members now making retirement preparations. In conclusion, the findings suggest that mandatory retirement policies limiting the ability of faculty members to continue working past some age and directly influence retirement plans.

5. Preliminary Results from the Survey of University Faculty Members

a. Attitudes Toward the Exemption and to Mandatory Retirement Age

The attitudes of faculty members, referred to earlier, are of key importance in making any decision about continuing the present exemption for tenured faculty members to the minimum mandatory retirement age of 70. Accordingly, we attempted to ascertain the extent to which faculty members favor continuation of the age 65 exemption. Overall, 70 percent of all faculty respondents indicated that they "oppose" or "strongly oppose" continuation of the exemption.

We also asked faculty about their attitudes toward removing altogether the minimum mandatory retirement age. For the entire sample, 60 percent of all respondents "favor" or "strongly favor" complete elimination of mandatory retirement ages for faculty members.

In contrast, we find that about one fifth of all faculty members "favor" or "strongly favor" continuation of the age sixty-five exemption and almost a quarter of all faculty members oppose elimination of the mandatory retirement age.

b. Expected Age of Retirement

About 90 percent of all respondents provided an expected age of retirement. Ten percent have no idea as to when they will retire and 5 percent say they will never retire. Only two percent expect to retire before age 60, 24 percent plan to leave by age 62, and another 5 percent expect to retire before age 65. Then there is a big increase, with 26 percent expecting to retire at age 65, 5 percent in the next two years, and another 35 percent from age 68-70. About three percent plan to retire after age 71.

c. Changes in the Expected Age of Retirement

Almost 30 percent of the respondents indicated that they had changed their expected age of retirement over the past several years. Of this total 66 percent delayed their retirement age, 29 percent accelerated their expected retirement age, and 5 percent changed it only marginally. Among those who now expect to retire at ages 66-67, for example, most pushed back their expected age from 65. This change may represent a response to the shift in the age of mandatory retirement. Among those now expecting to retire at age 65, over half earlier planned to retire before age 65. Among those who now plan to retire at age 68-70, two-thirds had earlier planned to retire at age 65.

d. Response to Inflation

At the time of our survey the inflation rate was 12-15 percent annually, having risen progressively over the past decade. We wanted to know whether higher rates of inflation would cause respondents to accelerate or delay their expected age of retirement.

We first asked whether continuation of the current inflation rate of 12-15 percent would cause them to delay retirement. One-third of the respondents indicated they "strongly agree" that they would delay retirement if these rates continued. Another one-third indicated they agreed with the statement. Only 15 percent voiced disagreement, while the remaining 21 percent indicated uncertainty. This distribution of responses suggests that there is substantial uncertainty about inflation and what it will do to the well-being of faculty members.

We also asked whether a reduction in the inflation rate to the 7-10 percent range might cause people to retire earlier. Only 17 percent of the respondents agreed or strongly agreed with this statement. Fifty percent disagreed and 32 percent were uncertain. In short, a reduction in the inflation rate much below current levels seems unlikely to produce much change in retirement ages.

In summary, inflation has already affected the attitudes of faculty members about their expected age of retirement. A majority, it appears, are likely to delay retirement so as to minimize the rate at which the real value of their retirement benefits will decline.

PART VI.

CONTINUED EXISTENCE OF MANDATORY RETIREMENT RULES, CONSEQUENCES OF MANDATORY RETIREMENT RULES ON LABOR FORCE PARTICIPATION BY OLDER WORKERS, ESTIMATES OF RESPONSE BY OLDER WORKERS TO CHANGE IN THE MANDATORY RETIREMENT AGE

1. Development of Mandatory Retirement Policies

Employer mandatory retirement rules and employer pensions have historically been closely related. Prior to the widespread adoption of formal pension plans during the 1940's, both pensions and mandatory retirement rules were rare. As the Social Security program developed in the late 1930's, policies to encourage retirement arose. This led to the development of both compulsory retirement rules and pension plans to help facilitate retirement. One of the clearly understood purposes of Social Security when it was enacted in 1935 was to encourage workers to leave the labor force by providing an economic base for retirement. Thus, the Social Security system has significantly affected retirement age by providing an economic base for retirement and establishing retirement as an appropriate and expected occurrence in old age.

The sharp increase in private pension plans in the 1940's occurred primarily to encourage and speed up retirement by executives. However, partially aided by unions' collective bargaining agreements, this pension coverage gradually spread to of employees. It became general practice to structure private pensions as supplementary to social security and the Social Security minimum age for receipt of retirement benefits became the actuarial basis of the private plans. The effect of collective bargaining on the presence of mandatory retirement provisions in pension plans has followed no obvious trend. A Department of Labor study in 1957-58 found that one-half of the 100 collective bargaining agreements on pension plans included compulsory retirement provisions. However, other studies have found no significant effect of unionization on the presence of mandatory retirement provisions in pension plans.

2. Mandatory Retirement Rules and Non-Neutral Pension Plans

Mandatory retirement rules are only one method of ensuring that a worker leaves a job at a given age. The lifting of such rules, while protecting the worker's right to continue at the same job at older ages, will not ensure that he/she will actually do so because, in addition to forced retirement rules, non-neutral pension plans have been widely used to induce job exit.

Pension plans can and do exert economic pressure on individuals to leave a job and leave the labor force. Of course, the very existence of a pension which can be taken at a given age will provide workers with the option of leaving their job and accepting benefits at that age. Few would object to this impact of pension plans on work. In fact, it is this aspect of pensions and of Social Security--ensuring a margin of income replacement for those who retire--which has long won support. Thus, generous pension plans will eliminate to some degree the "need" for mandatory retirement rules. But pension plans have been designed to induce retirement with even greater certainty. Most pensions decrease in lifetime value when postponed and therefore put economic pressure on workers to quit their jobs and accept a pension. Employers can affect the age of retirement by tilting pension benefits to ensure that the optimal time for acceptance of benefits occurs at the age they desire employees to separate from the firm.

It is likely that such non-neutral pension plans have at least as much to do with inducing retirement as mandatory retirement rules.

3. Incidence of Mandatory Retirement Rules Prior to the 1978 ADEA Amendments

Prior to 1978, mandatory retirement rules varied in their incidence across industries. Although on average, 44 percent of workers aged 58 to 61 in 1969 were in jobs with mandatory retirement rules, most were concentrated in communications, petroleum refineries, federal government, instruments, and transportation, where four workers in five were subject to mandatory retirement rules. The lowest incidence of workers in industries with mandatory retirement rules were in service industries, sales and apparel where one worker in five was subject to such rules. Industries with the highest incidence of mandatory retirement rules had the highest degree of private pension coverage and coverage by Social Security. Mandatory retirement rules and pension plans were more likely to be in higher wage industries with white collar workers. In addition, those industries in which physical demand requirements are important tended not to have mandatory retirement rules.

4. The Consequences of Mandatory Retirement on Older Worker Labor Force Participation

This section presents an analysis of the labor market effects on older workers of raising the mandatory retirement age limit. Two types of analysis are reported: (a) an examination of the effects of raising the mandatory retirement age, availability of pension benefits and other variables on the retirement decisons of workers who were subject to the former mandatory retirement age of 65; and (b) a review of estimates of overall labor supply effects of raising the mandatory retirement age based on the above analysis and other major estimates.

a. Major Conclusions of Labor Supply Research

Our study has found that the prior existence of age-65 mandatory retirement rules had a significant impact on the likelihood that workers reaching that age would withdraw from the labor force. For example, men aged 62-64 who were wage or salary workers in 1973 had their probability of continuing to work at any job over a two-year period diminished by about 28 percentage points due to facing an age-65 mandatory retirement rule. Women age 58-61 were estimated to have a decline in their probability of continued work of about 8 percentage points associated with the prospects of the future imposition of mandatory retirement by their employers.

Had the 1978 ADEA Amendments become effective during the period analyzed in this study (1973-1975), the result of raising the mandatory retirement age from 65 to 70 would have been that at most 200,000 older workers would have been working in 1975 instead of retired. Such a result is, of course, of great significance to individual workers approaching age 65 who want to continue working and are unlikely to have much opportunity at that age to move to other jobs. This increase is less important in that it represents a measurable increment to the total number of such workers; for example, this maximum figure (200,000) implies a 3-percent increase for men aged 64-66 in 1975. However, viewed in the context of the national economy, this change in labor supply would be a miniscule increase in the total workforce (less than two-tenths of one percent).

This study also estimates the relative importance of Social Security and pension benefit entitlements to the retirement decision, both in terms of the current year tradeoff (loss of a year's wages vs. loss of retirement benefits) and the wealth effect (the present asset value of a lifetime of future benefits). The current trade-off of benefits vs. wages was found to be especially important, reflecting the fact that Social Security and the bulk of pension plans are designed to encourage retirement.

Since mandatory retirement provisions are closely tied to private pensions, this research indicates that the incentives inherent in pension plans are more important determinants of behavior (people do respond to these incentives) and therefore that the eventual impact of changes in mandatory retirement legislation depends critically on how pension characteristics change. If employers cannot dismiss employees at age 65 on the basis of age but are permitted to structure fringe bnefits to make it very expensive for workers to continue working beyond a this point, changes in mandatory retirement rules will have only a modest aggregate impact. On the other hand, if employers were to remove these financial discentives to work, the impact of the ADEA Amendments will be more pronounced.

b. Other Estimates of the Responses of Older Workers to the Change in Mandatory Retirement Age

(1). Economic Studies

The Department of Labor Estimate. Some of the earliest and most frequently cited estimates of the number of older workers projected to remain on their jobs in response to the change in mandatory retirement age were made by the U. S. Department of Labor. The Department estimated that between 150,000 to 200,000 workers aged 65 to 69 were not in the 1976 labor force because of enforced mandatory retirement. The smaller estimate was based on Current Population Survey (CPS) data relating to persons who want jobs but are not in the labor force. The larger estimate was based on responses of mandatory retirees surveyed as part of the Social Security Admininstration's Survey of Newly Entitled Beneficiaries (SNEB). Both estimates attempted to identify three groups of workers dissatisfied with mandatory retirement provisions: (1) workers out of the labor force who say they would work in the absence of mandatory retirement; (2) workers unemployed because of mandatory retirement provisions; and (3) workers working part time rather than full time because of mandatory retirement provisions. Once these workers were identified, estimates were made of the number that would continue to work if the mandatory retirement age were changed from 65 to 70.

Halpern's Estimate. Halpern (1978) suggests that the short- and long run effects of raising the mandatory retirement age may be quite different. Her estimate of the short-run effect is based on data from the National Longitudinal (Parnes) Survey and SNEB and assumes that the structure of the Social Security program will not change. Using the 1971 interview data from the Parnes Survey, she estimates that about 8 percent of the saple (men aged 49 to 59 in 1966) would be forced to retire earlier than they desired under a mandatory retirement age of 65. Data from the 1969 SNEB indicate that 9 percent of the sample were mandatorily retired and would have continued to work in the absence of a mandatory retirement age. Data from the 1968 SNEB, originally analyzed by Schulz (1976), indicate that 5 percent of the sample was retired unwillingly, was able to work and unable to find a new job. Taking these estimates together, Halpern projects out six years beyond the change in mandatory retirement age (1984) and predicts that the labor force may have an additional 375.000 older workers as a result of the change. Since her estimate assumes that everyone who wants to work past the old mandatory retirement age of 65 will continue to work until forced to retire at age 70, it is overstated. Taking the overestimation problem into account, Halpern suggests a more realistic estimate would be around 200,000 additional workers, which is consistent with the Department of Labor estimate.

Clark, Barker and Cantrell's Estimate. Clark, Barker and Cantrell (1979) use three estimation procedures to predict the increase in labor force participation due to the change in mandatory retirement age. Results of all three procedures are approximately the same. the removal of mandatory retirement is projected to increase the labor force participation of the age-64 cohort by 5 to 6 percentage points.

Wertheimer and Zedlewski's Estimate. In a study for the Administration on Aging and further refined under this study, Wertheimer and Zedlewski analyzed the impact of mandatory retirement on the labor market behavior of men and single women in the 1969-1975 waves of the Social Security Administration Retirement History Survey.

This study found that mandatory retirement had significant negative effects on the labor supply of older workers, even when controlling for other strong retirement incentives. The most significant impact of mandatory retirement was on the probability of participating in the labor force. For

65-year-olds, the average reduction estimated for the three observation periods was 20 percentage points. For 66-69-year-olds, the average reduction found was smaller (13 percentage points for the 66-67-year-olds and 11 percentage points for the 68-69-year-olds). This study also found that mandatory retirement at age 65 had a negative effect on the labor supply of 62-64-year olds. This anticipatory effect reduced their participation rate by about 9 percentage points.

These results were used to make a projection of the impact or raising the mandatory retirement age to 70. It was estimated that in 1985 there will be approximately 250,000 more workers aged 62-69 as a result of the change in the law. This represents an 8-percent increase in the number of workers aged 65-69 and about a 3-percent increase in the number of workers aged 62-64. The authors also point out that while these increases are significant for the older population, they result in very small changes in the labor force as a whole.

Thus, the results of this study are generally in agreement with those presented earlier. (Note: An additional long-run analysis of labor force participation between 1980 and 2000 has recently been completed by Hendricks-Urban Institute. This analysis indicates similar results to other estimates.

The various studies combined present evidence that mandatory retirement age policies have significant effects on the labor force participation of the older population.

Although these estimates of additional older workers represent a substantial increase in the number of older workers in the labor force, they represent a very small portion of the entire labor force. In addition, these estimates are made using labor force participation rates derived from the behavior of older workers in the late 1960's and early 1970's. These workers were making decisions in response to environmental constraints, both physical and social, which will be different for succeeding cohorts of older workers. Thus, for example, continued high rates of inflation eroding the financial security of individuals may influence large numbers of older workers to continue working. On the other hand, if firms change incentives to favor early retirement even more than presently, the projected increase in the number of older workers in the labor force may never materialize or may be smaller than estimated. Due to these uncertainties the long-run impact of the law is difficult to predict.

(2) Industry Studies

A number of recent studies have assessed the attitudes of the business community and workers toward the change in mandatory retirement age. These studies are useful in that they provide insights into the attitudes and behavior of those directly affected by the change in mandatory retirement age: employers and employees. The pertinent results of thes studies are summarized below.

Harris Survey. In 1978 Johnson and Higgins, Inc. commissioned Louis Harris and Associates to conduct a study of American attitudes toward pensions and retirement. The sample included 1,330 full-time employees and 369 retired people as well as 212 company respondents. The respondents for the companies were selected by the chief executive officer of each company.

The outlook of current older workers is affected by pension coverage, with those covered having the most positive outlook toward retirement. However, over 50 percent of the workers expressed a desire to continue to work instead of retiring: 19 percent wanted to work full-time; 24 percent, part-time; and 8 percent wanted to retire from their primary job and change jobs to work with a different employer.

Of those workers already retired, the major concern was inflation. Fifty-three percent of retirees wanted to work; about half of this group preferred full-time work. An earlier 1974 Harris survey found that 45 percnt of elderly retirees "had not looked forward to stopping work."

Regarding mandatory retirement, respondents were asked whether they agreed with the statement: "Nobody should be forced to retire because of age, if he wants to continue working and is still able to do a good job." Eighty-eight percent of the current employees agreed with this statement, as did 67 percent of the business leaders. In a similar 1974 survey, 86 percent of the general public age 18 and over felt this way.

Spencer Study. In 1979, Charles D. Spencer and Associates, Inc., surveyed 100 employers to estimate the impact of the change in mandatory retirement age. The number of employes aged 65 or older working in the 100 sampled companies in December 1978 was 0.18 percent of total employment in these companies. As of June 1978, six months after the change in mandatory retirement age became law, the number of workers 65 and older continued to constitute 0.18 percent of total employment.

When asked to estimate the near-term impact of the amendments, 39 company respondents agreed that a few more employees will work longer and retire between ages 65 and 70; however, the majority of employers expected no significant change in retirement patterns. Twenty-two percent of the respondents qualified their response by saying that continued inflation could change anticipated retirement trends.

Hewitt Study. In November 1979, Hewitt Associates surveyed 900 members of The Compensation Exchange, a nationwide organization representing a cross-section of business and industry. Responses were received from 582 companies. The section of the survey dealing with benefit issues and the Age Discrimination in Employment Act are discussed here.

Of the 582 responding companies, 429 reported on the number of workers who continued to work past age 65. It was reported that, on average, 45 percent of the workers reaching age 65 continued to work. Since employers were not asked how this compared with the pre-1979 work behavior, a measure of the change associated with the 1978 ADEA Amendments cannot be computed. Employers also were not asked how long past age 65 those who continued to work did so.

The survey asked companies with defined benefit pension plans whether they provided for some benefit increases for employees working past age 65. A majority, 52 percent of the companies, were providing no benefit increases. In addition, 47 percent of the companies reduced group life insurance benefits at age 65. In terms of health benefits, no clear pattern had emerged.

Copperman Study. Copperman, Montgomery and Keast (1979) conducted a study of the private business community in order to determine the preliminary impact of the ADEA amendments.

Most firms that had a mandatory retirement age prior to the legislation plan to maintain a mandatory retirement age limit at 70. Size of firm is a key variable in a number of findings. Larger firms were more likely to report that they would change their personnel policies and more rigorously apply performance approaches than small firms. In general, larger employers anticipated a greater impact of the ADEA than do smaller ones. However, the majority of employers (58 percent) expect no changes in response to the

Amendments. It is anticipated that any effect which does result will be dispersed throughout the economy. Firms with no prior mandatory retirement age envision less impact than do firms which had such a policy. According to 80 percent of the respondents, continued inflation would lead to an extension of the worklife of older workers.

In summarizing these studies, it is appropriate to employ the terms "tentative and preliminary" since the data were collected either immediately prior to or immediately after the time that the Amendments became law. Thus, results either reflect an anticipatory guess or a preliminary appraisal since it was too early for the pattern of worker and employer responses to have materialized. In general, surveyed employers expect little change in the average retirement age due to the change in mandatory retirement age. On the other hand, the surveys seem to reveal a desire on the part of employees to continue working.

Thus far, most employers are not reporting any major shifts in early retirement patterns. While those having a former mandatory retirement age of 65 have raised this age to 70 (majority of cases) or eliminated it entirely, they have not altered the normal eligibility age for receipt if pension benefits - usually 65. While some employees are remaining beyond age 65 under the new mandatory retirement age policies, the vast majority continue to retire early. No clear trend of later retirement is currently discernible.

INTERIM REPORT

U. S. Department of Labor Studies on the Effects of Raising the Age Limit in the Age Discrimination in Employment Act (Studies Required by Section 6 (a)(1) of the Age Discrimination in Employment Act Amendments of 1978, Public Law 95 - 256).

(41)

Preface

The pervasiveness and harmful effects of mandatory retirement practices have been of increasing concern to the Congress over the past twenty years. As a result of increasing information on the extent and consequences of mandatory retirement policies, Congress enacted the Age Discrimination in Employment Act in 1967 and subsequent Amendments in 1974 and 1978.

Since early Congressional consideration of age discrimination in connection with the Civil Rights Act of 1964, the Congress has enacted and subsequently strengthened laws prohibiting unreasonable employment discrimination on the basis of age. (The ADEA Amendments of 1978 represent the most recent extension of protection against age discrimination in employment.) At the time the Admendments were being considered, the Congress was particularly concerned about the effectiveness of the law in protecting the employment rights of older workers, the consequences of an increased mandatory retirement age on labor force participation by older and younger workers and employer response to the law. In addition, the Congress expressed the need for further and more comprehensive information as to the feasibility of further modification of the mandtory retirement age. For these reasons, and before considering additional protective legislation, the Congress required that the Secretary of Labor conduct a comprehensive study of the effects of the 1978 Amendments to the ADEA and provide both an interim and final report on the results of the study.

In response to this requirement the Department of Labor initiated in 1979 an extensive series of studies designed to produce information on the current and probable future consequences of the 1978 ADEA Amendments. Research findings from many of these studies are now available and are summarized in this interim report. These findings include information on the labor force participation effects of mandatory retirement, response of current workers and employers to the increased mandatory retirement age, long term projections of consequences of alternative mandatory retirement age policies and the effects of the ADEA exemptions for tenured faculty employed at institutions of higher education and bona fide executives. Additional information on older worker characteristics and personnel and compensation policies which encourage the employment of older workers will be included in the final report on the ADEA Studies in January, 1982. This interim report is designed to present the most important research findings relevant to the major areas of Congressional concern: the effects of raising the upper age limit in the ADEA to 70; the feasibility of extending or eliminating the upper age limitation for private sector and nonfederal public sector employment and the effects of the exemptions permitting age 65-69 mandatory retirement for tenured faculty members at institutions of higher education and certain executive employees. The report is descriptive in nature and does not include recommendations. Appropriate recommendations will, however, be included in the final report now under preparation.

In reviewing the extensive research findings from our studies, the Department of Labor is concerned with both the impact of mandatory retirement on the individual and administrative and financial consequences of the ADEA legislation for employers. In addition, the Department recognizes that mandatory retirement policies are an important factor influencing the retirement decision, but that this decision is also simultaneously affected by public and private pension policies and employer personnel policies. Study findings therefore not only reflect the consequences of mandatory retirement policies alone but more importantly, examine such consequences in the context of the major factors which affect retirement behavior in the United States.

I. Introduction

> "It cannot be disputed that they (older workers) constitute a class subject to repeated and arbitrary discrimination in employment. While depriving any...employee of his job is a significant deprivation, it is particularly burdensome when the person deprived is an older citizen. Once terminated, the elderly cannot readily find alternative employment. The lack of work is not only economically damaging but emotionally and physically draining. Deprived of his status in the community and of the opportunity for meaningful activity, fearful of becoming dependent on others for ... support and lonely in ... new found isolation, the involuntarily retired person is susceptible to physical and emotional ailments, as a direct consequence of his enforced idleness. Ample clinical evidence supports the conclusion that mandatory retirement poses a direct threat to the health and life expectancy of the retired person." (Justice Thurgood Marshall)

The Age Discrimination in Employment Act was enacted by Congress in order to eliminate arbitrary age discrimination in employment, promote the employment of older persons based on their ability rather than age, and to help employers and workers to meet problems arising from the impact of age on employment. The Act was originally passed in response to a report by the Secretary of Labor in 1965 which documented the existence of widespread age discrimination in employment and recommended specific legislation to eliminate such discrimination.[1]

The original Act (1967) included a requirement that the Secretary of Labor undertake a study of institutional and other arrangements giving rise to involuntary retirement and report findings with any appropriate legislative recommendations to the Congress.[2] Additional research requirements were included in the Amendments of 1978 which required an examination of the effects of raising the upper age limit under the Act to 70, an assessment of the feasibility of raising or eliminating the mandatory age altogether and an examination of exemptions contained in the Act as amended.[3]

Beginning in 1968 and continuing through 1978, the Secretary submitted an Annual Report to Congress covering Departmental activities under the Act as required by law.[4]

[1] The Older American Worker, Age Discrimination in Employment, Report of the Secretary of Labor to the Congress under Section 715 of the Civil Rights Act of 1964, U. S. Department of Labor, June 1965.

[2] Age Discrimination in Employment Act of 1967, Public Law 90 202, Section 5.

[3] Age Discrimination in Employment Act Amendments of 1978, Public Law 95 - 256, Section 6.

[4] Age Discrimination in Employment Act of 1967, Public Law 90 - 202, Section 13. In 1979, the Equal Employment Opportunity Commission assumed responsibility for enforcement of the Age Discrimination in Employment Act. Under Reorganization Plan No. 1 of 1978 which authorized this transfer, the Department of Labor continues to be responsible for research (including studying the effects of the 1978 ADEA Amendments) and for educational and informational activities relating to expanding employment opportunities for older workers.

As they were available, research findings pertaining to involuntary retirement from various ongoing studies were incorporated within these annual reports. These findings continued to indicate the existence and utilization of compulsory retirement policies and practices by employers with detrimental discriminatory effects on older employees.

In the eleven year period during which the Department had responsibility for enforcement of the Act, it was successful in substantially reducing the occurrence of various prohibited employment practices, providing information on the provisions of the Act to employers and employees throughout the nation covered by the Act, and in developing an efficient and effective enforcement program for compliance to the provisions of the law.

ADEA Amendments of 1978

The Age Discrimination in Employment Act Amendments of 1978 represented a substantial modification of the protective provisions of the original Act, by extending the upper age limit of protection under the Act to age 70 for most private sector and nonfederal public employees, prohibiting mandatory retirement of covered workers under employee benefit plans and extending age discrimination protection without an upper age limit to almost all Federal employees. These provisions were enacted based upon evidence presented to Congress indicating the widespread continuing use of mandatory retirement rules (covering approximately half of the private non-agricultural workforce) accompanied by continued substantial age discrimination in employment. In addition, when considering the Amendments, Congress became aware of widespread public opposition to mandatory retirement and received substantial scientific evidence refuting a variety of prevalent negative beliefs about the physical, psychological and intellectual capacities of older workers. Moreover, the Congress was also concerned that mandatory retirement policies and age discrimination in employment were significantly influencing the trend toward earlier retirement, and that with an expanding older population having longer life expectancy, severe strains would be placed on the financial solvency of public and private pension programs. Finally, continuing inflation was resulting in eroding the value of fixed retirement benefits and because of limited employment opportunities, older persons were unable to supplement declining real incomes. These and a variety of other considerations resulted in enactment of the ADEA Amendments of 1978. (It is important to point out that in enacting additional protection against age discrimination in employment, the Congress continued provisions in the law which permit employers to: (1) observe the bona fide occupational qualification exception; (2) observe the terms of a bona fide seniority system or any bona fide employee benefit plan except that no seniority system or employee benefit plan shall require or permit the involuntary retirement of any individual because of age; and (3) discharge or otherwise discipline an individual for good cause.)

In enacting the new provisions, the Congress was concerned about several potential consequences of an increased mandatory retirement age. The major areas of uncertainty included: (1) the possibility of an adverse impact on employment opportunities for younger and minority employees caused by large scale retention of employment of workers after age 65; (2) potential administrative burdens on employers related to performance assessments; and (3) possible cost implications for pension plans and (4) possible difficulties for universities and for major corporations in adjusting to the upper age limit of 70. In addition, when considering the legislation, the Congress discussed the alternative of completely eliminating the mandatory retirement age but decided that further information on the consequences of such a policy was needed in order to consider this alternative.

Research Required by 1978 ADEA Amendments

The 1978 amendments required that the Secretary of Labor conduct an extensive study of the consequencs of the new coverage provisions of the law including: (a) an examination of the effects of raising the upper age limit to 70; (b) a determination of the feasibility of further extending or eliminating the age-70 limit on coverage for the private sector and nonfederal public employment; (c) an examination of the effects of the exemptions for tenured faculty and certain policymaking executives. In meeting this requirement the Department of Labor first reviewed Congressional hearings, debates and reports and noted that they consistently referred to the lack of empirical infomration available on mandatory retirement upon which legislative policy decisions could be based. A continuing need was cited for comprehensive research to more completely respond to Congressional concern with both institutional factors leading to involuntary retirement and the response of employees and employers to the 1978 Amendments. The Department also reviewed the existing information available which could be used to analyze the mandatory retirement issue and concluded that this information could not satisfy Congressional concerns since it was neither comprehensive nor timely.

The Department therefore concluded that a major research program was necessary to properly respond to the requirements specified in the law and provide Congress with more comprehensive information than that available in the past. It therefore initiated an extensive series of studies designed to provide the needed information for both the interim and final reports required by Congress. These studies are as follows:

1. The Effects of Raising the Age Limit for Mandatory Retirement in the Age Discrimination in Employment Act (existence of mandatory retirement age limits, direct effects of age limits on older workers, effects of mandatory retirement limits and pension rules on the retirement decision, long run analysis of adjustments to the change in mandatory retirement age, indirect effects of the mandatory retirement age limits on younger workers, effects of the executive exemption provision)

2. The National Survey of Employee and Employer Response to ADEA Amendments (characteristics of employees, knowledge of ADEA, retirement plans, knowledge of employer policies, demographic data; employer personnel policies, retirement policies, responses to ADEA, pension and fringe benefit policies)

3. Study of the Effects of the ADEA on Tenured Faculty (mandatory retirement policies in higher education, national survey of university retirement and pension policies and faculty retirement plans, university and faculty response to ADEA, effects of mandatory retirement policies, long run adaptations to change in mandatory retirement age)

4. Characteristics of Current Older Workers (older persons in the labor force, occupations, industries, demographic characteristics, types of employment)

5. Review of the Bona Fide Occupational Qualification Provision in the ADEA (analytical review of legislative history of BFOQ provision, major litigation and areas requiring further clarification)

6. Employment Opportunities for Older Workers (review of recent developments in employer personnel and compensation policies for older workers, current barriers to employment, recommendations for improving employment opportunities)

*7. Analysis of Employer Personnel, Fringe Benefit and Wage Policies Related to Retirement (prevalance of retirement incentives, consistency in employer retirement policies, perception of policies by employees, effects of policies on retirement age)

*8. Potential Effects of Inflation on Retirement Age (current evidence regarding effects of inflation on retirement decision, future consequences on employee behavior)

(*to be intitiated FY 1981)

The studies undertaken by the Department of Labor in reponse to the research requirements of the 1978 Amendments to the Age Discrimination in Employment Act represent the most comprehensive approach to date in examining the current and potential future effects of the legislation on employees and employers. In conducting the studies, the Deparment has examined: the historical basis for mandatory retirement; past effects of the former mandatory retirement age limit; the current and probable future effects on labor force participation of a mandatory retirement age of 70; the indirect effects of this age limit on younger workers including minority employees; the current and probable future response of employees and employers to the age 70 criterion; the consequences of the exemptions now contained in the law; and the long term effects of alternative mandatory retirement policies. The research findings in these areas respond directly to Congressional concern with the impact of the ADEA Amendments of 1978.

In conducting these extensive studies, the Department is also responding to the consistently expressed mandate by Congress to more thoroughly examine and document the overall consequences of mandatory retirement age limits for older workers. Such an examination requires a basic understanding of the historical origins of age discrimination in employment and current and probable future retirement patterns of American workers. The continuing existence of age discrimination in employment is clearly a function of the discriminatory attitudes and practices of the past which continue to operate in the present despite protective legislation and considerable modification in retirement policies, practices and behavior.

Early History of Age Discrimination in Employment

The emergence of age discrimination in employment can be traced to the late 1800's in the United States. There is some evidence to indicate that even at this time, negative beliefs about the capacities and productivity of the aged were already common in the nation and that these ideas continued to gain in strength despite the fact that older persons often controlled and managed major industries.[5] There is also reason to believe that the development of retirement as a social pattern in industry, served to enhance and legitimize employment discrimination practices despite early evidence that older workers were capable, conscientious and productive employees.[6]

Prior to about 1920, age discrimination in employment was justified primarily on the basis of the belief that "modern technology" required substantial physical strength, agility and endurance which was generally beyond the capacity of older workers. Thus, the requirements of industrial technology and efficiency were seen as causing the employment problems of the older worker, and justifying early discharge from employment. These early beliefs in the physical limitations of older workers led to substantial age discrimination in hiring which was still continuing almost unabated prior to the passage of the Age Discrimination in Employment Act in 1967.

Despite the gradual publication in the 1930's of industrial studies that demonstrated the advantages of older workers in terms of productivity, reliability and physical capacities, age discrimination persisted and grew largely because personnel managers and other corporate officials remained unconvinced of the viability of older workers.[7] Thus, rigid age limits in hiring and restrictive physical examinations continued to be utilized to limit the number of older workers in the labor force.

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[5] Achenbaum, W. A., Old Age in the New Land: The American Experience Since 1790, Johns Hopkins University Press, Baltimore: 1978.

[6] Graebner, W., A History or Retirement, Yale University Press, New Haven: 1980.

[7] Workers Over 40, A Survey by the National Association of Manufacturers to Determine the Status of Workers 40 and Over, National Association of Manufacturers, New York: 1938

These conditions led to early studies of age discrimination, most of which concluded that the technological environment combined with pensions, group insurance and workmen's compensation, were responsible for the continuation of discriminatory practices. Nevertheless, gradually and imperceptibly, a shift in beliefs about age discrimination occurred, with negative stereotypes about older workers becoming the dominant reason for the continuation of discriminatory employment practices.

Retirement as an institution gradually emerged in a society where age discrimination was already widely practiced. While age discrimination did not diminish in intensity, retirement served as a convenient method for employers to arrange the work force so that younger workers were predominant and to reduce the demand for employment by older workers. Retirement policies, accompanied by continuing discrimination in employment based on age, became a consistent and significant social pattern which resulted in substantial reductions in labor force participation by older persons.

Demographic and Retirement Trends

In evaluating the effects of age discrimination in employment laws and regulations it is essential to recognize that the behavior of both older employees and their employers is significantly influenced by changing demographic and economic circumstances and by current governmental and private sector retirement policies.

The general aging of the population is now a very well known fact and implications of this trend for retirement policy and pension systems are receiving widespread national attention. It is possible that the combination of changing demographic circumstances and current economic conditions will result in major modifications in current retirement and pension policies which led to the early retirement trend and consequentially significantly restricted labor force participation by older workers. Changes in national retirement policies could substantially alter present retirement patterns and concurrently lead to a reduction in age discrimination in employment.

Two trends which have developed over the past twenty-five years are of the greatest significance in connection with older worker labor force participation. The first of these is the gradual aging of the population and workforce, and the second, the declining labor force participation of older workers.

1. Population Aging

Under intermediate demographic assumptions, the number of persons age 65 and over will grow from 25 million (11 percent of the total population) in 1980 to 32 million (13 percent of the population) in the year 2000 and to more than 55 million (22 percent of the population) by the year 2030. Today, 31 percent of the people in this country are 45 years old or over (up from 28 percent in 1950) -- this figure will increase to 39 percent by the year 2050. Contributing to population aging is the gradual increase in life expectancy at older ages. Medical advances in the future could result in additional increases which would lead to higher proportions of older persons in the population.

These population trends may result in a gradual aging of the labor force in the years ahead. If labor force participation by older workers had been increasing consistently with population growth, the current serious pension financing problems would have been significantly reduced.

2. Declining Labor Force Participation

While our overall population continues to age, dramatic changes in the labor force participation of older workers have taken place over the past twenty-five years. Particularly significant are declines in labor force participation by men aged 55-64 and 65 and over. Overall, the labor force participation rate of men 55 and over fell from 65 percent in 1955 to 46 percent in 1980. Among men 65-69 years of age, 57 percent were still in the labor force in 1955 -- in 1980 only 28.5 percent were employed.* For all men aged 65 and over, labor force participation has continued to decline at an accelerated rate since 1970. At that time about 27 percent were employed whereas only 19.1 percent were in the labor force in 1980. There has also been a modest decline in participation by workers 45-54 years of age. Department of Labor projections indicate that if present retirement and pension policies continue, labor force participation by older persons will continue to decline in the future.

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* Labor Department projections indicate that this rate will continue to decline through the year 2000.

The retirement decision of today is influenced by a complex set of rules and practices which have institutionalized age 65 retirement and resulted in a majority of workers retiring before that age. Mandatory retirement policies and rules are but one factor influencing the retirement decision and therefore must be considered simultaneously with other factors. Currently both public and private pension systems provide substantial incentives for early retirement and retirement at the age of 65. The major public retirement income program - social security - has established eligibility ages of 65 for full and 62 for reduced benefits and utilizes an earnings test provision which reduces benefits to retirees after reaching an earnings limit. In addition, most private pension plans prohibit annuitants from returning to permanent part-time or full-time employment without temporary loss of all or part of their pension benefits. Early retirement options have continued to proliferate in both the public and private sectors often accompanied by substantial pension inducements. All of these policies generally result in encouraging complete retirement by older workers at or before age 65. Thus, before age 62 early retirement provisions of employer pension plans often make benefits available to employees; between age 62 and 65 social security eligibility and the associated retirement test provide additional financial incentives to retire fully or work part-time; age 65, the normal retirement age under social security and most private pension plans, presents additional incentives to accept pension benefits (especially since little opportunity exists beyond this age for further employment and associated increased pension benefits under present arrangements) and finally at age 70, mandatory retirement is now imposed by a large number of employers.

In summary, the consequences of these policies have significantly reduced labor force participation by older workers. The decline in participation which has been continuing for decades and which was particularly rapid during the early 1970's has been slowing recently, but it has not stopped. For men aged 55 to 64 the labor force participation rate trend has continued slowly downward over the past five years declining to 73.5 percent in 1980. For men 65 and over, the trend, after rapidly for many years, seemed to stabilize during 1976-1979 but receded further in 1980 to a new low of 19.3 percent. For older women, labor force participation rates have been stable in recent years -- age 55-64 - 41 percent, age 65 and over - 8 percent. A particularly significant development is the rapid decline in labor force particpation of black males aged 55-64 over the past two years to the point where in 1980 their participation was a full 10 percentage points below their white male counterparts. Thus, the decline in labor force participation among older workers has abated but not stopped. For men aged 55 and over the downward trend in participation which began prior to 1950 is continuing; for women the trend seems to be leveling off and the rate of decrease has slowed considerably. Department of Labor projections indicate a continuation of these trends through the year 1995. However, for workers aged 65 and over, there is a possibility (depending upon economic conditions) that labor force participation may hold constant or decrease only modestly in response to continuing inflation and the increase in the mandatory retirement age under the ADEA.

It is generally agreed that the increasingly earlier availability of liberalized social security (including disability) and private pension benefits and a continuation of compulsory retirement practices has led to the development and intensification of the trend of lower labor force participation at older ages. A continuation of this trend into the next century will have two major consequences: (a) a substantially increased retirement financial support burden for a smaller workforce; and (b) even fewer opportunities for older persons to remain employed because of institutionalized early retirement practices and pension programs.

There are several reasons for concern about the continuing decline in labor force participation by older persons. First, the future economic position of an older person may be endangered by early labor force withdrawal since longer periods of retirement are now anticipated under conditions of sustained inflation; second, earlier retirements increase the financial stress on both social security and private pension plans; third, shortages of skilled labor could develop in certain industries as could general labor shortages, and fourth, it appears that older person's preferences for part-time employment are increasing but that labor demand is not sufficient to satisfy their current employment needs. For these reasons, the potential for reversing the decline in labor force participation and raising or eliminating the mandatory retirement age have become major public policy issues.

The Age Discrimination in Employment Act (ADEA) as amended is designed to prohibit arbitrary discrimination in employment based on age and promote employment opportunity for older workers. At present these objectives must be accomplished in an environment characterized by increasing early retirement in response to current public and private pension policies. While mandatory retirement prior to age 70 is now prohibited, few incentives exist for older employees to remain on the job, since after age 65, foregone social security benefits are generally not recoverable and continued pension accruals are not assured. Thus, while compulsory retirement policies cannot be imposed prior to age 70, many if not most employers implicitly and explicitly anticipate that few workers will continue employment at older ages and therefore provide few alternatives or incentives to encourage such employment. The persistence of this pattern, coupled with the substantial early retirement incentives in current pension systems, may place limits on the rapid achievement of the goals of the Age Discrimination in Employment Act unless more incentives are provided for employment of older workers and the need for retaining a mandatory retirement age is reexamined.

Estimated Number of Employees Within Scope of the ADEA

An estimated 73 million workers of all ages are employed by employers who have 20 or more employees and are, therefore, covered by the ADEA. The exact number of these 73 million workers who are in the 40 to 70 year old age group protected by the Act is not known. However, labor force data show that of the 104,720 million persons 16 years of age and older who were in the civilian labor force in September 1980, 39 percent were 40 to 70 years of age (Table 1). Applying this proportion to the estimated 73 million persons employed by covered employers yields an estimate of 28 million persons covered by the ADEA, or 7 out of every 10 persons aged 40 to 70 in the civilian labor force.

In addition to the original coverage of the 1967 Act, the above estimates include the Federal, State and local government employees and employees of employers of 20 or more employees added by the 1974 amendments. The 1978 amendments increased coverage by raising the Act's upper age coverage limitation from 65 to 70 in non-Federal employment and eliminating the upper age 70 coverage limitation in Federal sector coverage. The Federal sector change became effective September 30, 1978. New private sector and State and local government coverage became effective on January 1, 1979. However, certain bona fide executives, high policymakers, and tenured college faculty personnel aged 65 through 69 are exempt from the prohibition against compulsory retirement effective January 1, 1979. Table 1 shows that in September 1980, 1,217 million or .02 percent of the civilian labor force were persons 70 years of age and over; 1,801 million were 65-69 years of age. Current population projections of persons 16 years of age and older indicate a relative increase in the proportion of persons in the 40 to under 65 year age group in the next two decades -- from 33 percent in 1980 to 39 percent in 2000; the actual number of persons in this age group will increase by over 24,457 million (Table 2). Those 65 to 69 years of age, while expected to remain stable as a proportion of the population, are expected to increase in number by 492 thousand between 1980 and the year 2000. The labor force participation rate of persons in the 54 and under 65 year age group was 57.4 percent in 1979, but is projected in the high growth assumption to rise to 57.5 in 1985 and 57.8 in 1990 (Table 3). The number of persons in the labor force in the 54 and under 65 age group is expected to increase by only 83 thousand from 1979 to 1990. The labor force participation rate of persons 65 of age and over in the high growth assumption of the total labor force is expected to decline from 14.1 in 1979 to 13.8 in 1985 and 13.7 percent in 1990; in the 65-69 year age group, labor force participation is projected to remain stable at 21.4 percent from 1980 to 1990.

Table 1. Number and percent of persons in the civilian labor force 16 years of age and over, by specified age group, September 1980

Age Group	Number (in thousands)	Percent
Total	104,720	100.00
Under 40 years	63,593	61.00
40 and under 70 years	39,908	38.00
65 to 69 years	1,801	.02
70 years and over	1,217	.02

Note: Details may not add to totals because of rounding.

Source: U. S. Bureau of Labor Statistics, Employment and Earnings, October 1980.

Table 2. Estimated distribution of the population of the United States 16 years of age and over,by specified age group, 1980 to 2000

(Numbers in Thousands)

Age Group	1980		1990		2000	
	Number	Percent	Number	Percent	Number	Percent
Total	168,335	100	185,082	100	204,408	100
6 and under 25 years	37,619	22	31,493	17	37,660	18
5 and under 40 years	50,205	30	60,347	33	54,885	27
0 and under 65 years	55,584	33	63,418	34	80 041	39
5 years and over	24,927	15	29,824	16	31,822	16
65 to 69 years	8,700	5	10,022	5	9,192	4
70 to 74 years	6,793	4	7,782	4	8,244	4
75 to 79 years	4,324	3	5,501	3	6,394	3
80 to 84 years	2,816	2	3,639	2	4,236	2
85 years and over	2,294	1	2,881	2	3,756	2

ource: U. S. Bureau of the Census, Current Population Reports, Series P-25, No. 704, "Projections of the Population of the United States: 1977 to 2050," Series I, July, 1977, pp. 29, 31, 36, 37, 40, 50, and 60.

Table 3. Civilian labor force and labor force participation rates, by specified age group, actual 1979 and projected high growth assumption 1985 and 1990

Age group	Civilian labor force			Labor force participation rate		
	Actual	Projected high growth		Actual	Projected high growth	
	1979	1985	1990	1979	1985	1990
Total	102,908	118,252	128,123	63.7	68.4	71.1
6 and under 25 years	25,280	25,108	23,916	69.9	75.3	79.4
5 and under 54 years	63,336	77,636	88,873	78.3	84.6	88.0
5 and under 65 years	11,719	12,205	11,752	57.4	57.5	57.8
5 and over	2,573	3,303	3,582	14.1	13.8	13.7

ote: Projections in this table are not directly comparable to those in Table 2.

ource: U. S. Department of Labor, Bureau of Labor Statistics, The 1995 Labor Force: A First Look Draft), October 1980.

II. Research Findings

Section 6 of the ADEA Amendments of 1978 specifically requires: (a) an examination of the effects of raising the mandatory retirement age to 70; (b) a determination of the feasibility of raising further or eliminating this limitation; and (c) an examination of the effects of the exemptions in the Act for tenured faculty at institutions of higher education and for certain executive employees.

The studies undertaken by the Department provide information directly relevant to these areas of concern. To the degree possible, the prelininary research findings presented here are organized in response to the specified research requirements. However, an assessment of the overall current and future consequences of the ADEA Amendments requires an integrated consideration of findings from different major research areas and an evaluation of the overall effects of the new law through combining significant research results. It is therefore particularly important to understand the reasons for the existence of mandatory retirement policies and the effects of the former mandatory retirement age of 65 as well as the current consequences of the new age 70 limit, as a basis for developing further recommendations concerning the mandatory retirement age. Our findings permit such an overall consideration of the past, present and probable future consequences of mandatory retirement.

The findings will be organized as follows:

Part I. Effects of the 1978 ADEA Amendments on Employee Retirement Plans and Employer Personnel and Pension Policies

Part II. Effects of Mandatory Retirement on Younger Workers

Part III. Long Term Effects of Mandatory Retirement Policy Options

Part IV. Impact of the Exempt Executive Provision in the 1978 ADEA Amendments

Part V. Effects of the Tenured Faculty Exemption in the 1978 ADEA Amendments

Part VI. Continued Existence of Mandatory Retirement Rules, Consequences of Mandatory Retirement Rules on Labor Force Participation by Older Workers, Estimates of Response by Older Workers to change in the Mandatory Retirement Age.

The research findings presented in this interim report are derived from the studies being conducted by the Department of Labor. All of the studies are now nearing completion and therefore these findings can be viewed with confidence. In some instances however, the final results from our studies may modify the current findings. Such modifications, substantial additional detailed information from the studies, and the Department's recommendations, will be presented in the Final Report to Congress on the Age Discrimination in Employment Act Studies in January 1982.

PART I

EFFECTS OF THE 1978 ADEA AMENDMENTS ON EMPLOYEE RETIREMENT PLANS AND EMPLOYER PERSONNEL AND PENSION POLICIES

Part I

EFFECTS OF THE 1978 ADEA AMENDMENTS ON EMPLOYEE RETIREMENT PLANS AND EMPLOYER PERSONNEL AND PENSION POLICIES

Summary

The analysis has examined nine major areas:

- What factors influence an employee's planned age of retirement?
- How do employees' retirement plans change when an age-65 retirement policy is extended to age 70 or lifted altogether?
- How accurate is employee knowledge about their own firm's retirement policies, the federal ADEA Amendments, and (where applicable) state mandatory retirement laws?
- How have firms modified their mandatory retirement policies in response to the ADEA Amendments?
- Why are mandatory retirement policies important to firms?
- What was the pre-Amendment pattern of retirement behavior? And what retirement incentives were offered at the time of the survey?
- How have firms modified their benefit, personnel, and other retirement policies in response to the ADEA Amendments? What modifications are contemplated in the future?
- Do firms believe that employees will delay their retirement plans because of the ADEA Amendments? And what, if any, policies will firms change to counteract this trend?
- What do employers believe the impact would be, should a large number of older workers postpone retirement to age 70? And what, if any, policies firms would change in that event?

What follows is an overview of findings. In reviewing these the reader should be aware that the national survey of employees and employers was not a general survey of the workforce, but focused on those workers and employees who were most likely to be influenced by the 1978 ADEA Amendments. This meant, for example, excluding federal workers, excluding persons who worked for firms with less than twenty employees, and restricting the sample to persons age 40-69.

The Function of Mandatory Retirement

To understand the impact of the 1978 ADEA Amendments, it is necessary to understand the role of mandatory retirement itself. Our analysis centers on two, interrelated ideas: a "backstop" model to explain some firms' use of mandatory retirement, and a "target income" model to explain employees' retirement plans.

A discussion of the backstop model begins with the observation that mandatory retirement is far from universal. We estimate that in the mid-1970's, about 60 percent of persons surveyed had faced some mandatory retirement age. By the time of the survey itself (early 1980), 51 percent of the sample faced a mandatory retirement age of 70 or more while 45 percent faced no mandatory retirement age whatsoever. This suggests that the function of mandatory retirement can be inferred, in part, by comparing firms that used the device and firms that did not.

The likelihood that a firm would use mandatory retirement policy was strongly and positively related to the firm's size. When firms were asked their reasons for using mandatory retirement, all firms, but particularly large firms, put greatest emphasis on assuring promotional opportunities for younger workers. The promotion rationale was stronger than the oft-cited rationale of retiring unproductive workers.

Together, these findings suggest a picture of a large, mature, slowly growing firm that prefers to keep employees for an entire career and uses promotional ladders to retain its labor force. In the absence of rapid firm growth, promotion involves movement into already existing slots. Mandatory retirement is one policy which helps assure that slots will come open at predictable intervals.

At the same time, a firm using mandatory retirement also uses other devices to achieve this end. Firms try to reduce retirement ages by establishing relatively early ages of pension entitlement, and by offering a variety of incentives (e.g., continuation of health insurance) to retire even before "normal" retirement age. Employers who retained retirement age limits were significantly more likely to also offer incentives to encourage early retirement than other employers. Taken together, these financial incentives were quite effective. Among employees covered by a mandatory retirement rule, 43 percent were in occupations where employees retired by age 61, 63 percent by age 62, and 79 percent by age 64. In this context mandatory retirement serves as a "backstop" to force out those employees who did not respond to primarily financial incentives.

Financial incentives were generally effective because most employees form their retirement plans through a "target income" model. In this model, an employee wants to retire as early as he can, subject to the condition that he will have an adequate retirement income. Thus, retirement decisions are heavily influenced by the age of pension entitlement, the age of social security entitlement, as well as the behavior of peers. But while this model holds for many persons (particularly men), it does not hold for all persons. If the firm wants to assure a predictable rate of job openings, mandatory retirement can be used to increase retirement rates.

For example, we apply a target income model to men who believe they face mandatory retirement at age 65 and show that about 4 percent say they plan to retire after age 65. But were these same men faced with a retirement age of 70 or above, we estimate that 24 percent would want to retire after age 65 (though most would retire by age 68).

In summary, mandatory retirement rules are not used by all firms, and where they are used few workers are directly affected. But a significant majority of workers in large firms are subject to an age limit, primarily to "assure" that lines of promotion will remain open.

The Short-Run Impact of the ADEA Amendments

In assessing the impact of the ADEA Amendments, it is useful to separate the short-run and long-run effects. In the short run, the amendments had their most direct impact on the behavior of firms -- particularly firms' mandatory retirement policies -- and a much smaller impact on the plans of employees. In the long run, this balance may be reversed.

Fifty-three percent of employees sampled in the survey worked for firms that had changed their retirement policies "in the last few years". In almost all cases, (82 percent) these changes have arisen in whole or in part from the ADEA Amendments. Most of these recent changes attributed to the Admendments involved moving from one mandatory retirement age to a higher one, while relatively few changes involved abandoning a mandatory retirement age altogether. This reaction suggests that by the late 1970's, most employers who retained mandatory retirement policies did so by conscious choice. When these employers were forced to liberalize their retirement policies, they did the minimum amount necessary to be in compliance with the law to as to reduce the policy's effectiveness as little as possible.

The Amendments' short-run impact on other aspects of firm behavior was relatively weak. For example, it has often been asserted that a relaxation of mandatory retirement age would result in a more widespread use of performance evaluations as an alternative way of removing people from jobs. The survey suggests, to the contrary, that the incidence of performance evaluations was already highest in firms that have mandatory retirement rules, those with such rules were no more likely to have stricter evaluations in the future. Thus, the two policies serve as complements, rather than substitutes, for each other.

It was also anticipated that firms would discontinue pension accruals for workers over age 65. However, only 6 percent of employees currently permitted to continue accruals have employers who would suggest such a move.

Although at least half the short-run changers had been made by the time of the survey, the results suggest that nearly all the employer response has been, and will be, in the direction of providing more encouragement for employees to retire by liberalizing existing benefits, adding types of benefits, and shifting costs more toward the company. A maximum of 15 to 20 percent of surveyed older workers either have been, or soon may be, affected by employer policy changes. Most of the future benefit liberalizations being considered were in response to factors other than ADEA.

The ADEA Amendments' short-run impact on *employee retirement plans* was very weak, a conclusion that arises form several pieces of data. First, only 15 percent of the survey respondents could correctly identify the amendments' barring of mandatory retirement before age 70, while only 8 percent of the respondents in Maine, California and New Jersey could identify the parallel laws that existed in their states. By itself, this data means little since the ADEA Amendments might be affecting persons indirectly through changes in firm policy. But in practice, only 11 percent of the sample report having made a recent change in their retirement plans for any reason. About one-third of these actually decreased their retirement age and only one-tenth of these increased their retirement age explicitly because of the ADEA Amendments.

Finally, the survey contained an "experiment" to see whether people would change their planned retirement age upon being informed of the ADEA Amendments' details. In this experiment, about 8 percent of the respondents did increase their retirement age from 65 or less to 66 or more. But an equal proportion of the sample *decreased* their retirement age. And a person's increase or decrease in planned retirement age had nothing to do with whether the person thought he faced mandatory retirement at 65, mandatory retirement at 70, or no mandatory retirement whatsoever. In fact, the biggest change in retirement plans stimulated by the experiment was an increase from age 62 to 65, a change anticipated as most likely by personnel officers. (About three-quarters of all respondents in the experiment left their retirement age unchanged).

These data are consistent with the idea that most people have devoted at least some prior thought to retirement and their plans are based on their conceptions of their employers' policies. While these plans may change in the long run, they will not be changed immediately by being informed of the new age 70 mandatory retirement provision.

In summary, the ADEA Amendments had a significant impact on increasing the mandatory retirement age of some firms, but it had a relatively small impact on other aspects of firm behavior, and it had only a very limited impact on employees' retirement plans.

The Long-Run Impact of the ADEA Amendments

In the long run, the impact of the ADEA Amendments on employee plans may be somewhat larger and this, in turn, may induce employers to change their policies. Our analysis of the retirement plans of men showed significant differences between men who believed they were covered by an age-65 retirement rule and men who faced a retirement at 70 or above. On average, the second group retired two years later than the first with one quarter of the cohort wanting to retire at age 66 or age 67. Over time, as all men became aware that they can work to age 70, we would expect retirement dates to be delayed. (We do not expect this to happen for married women since their retirement decisions appear to be planned jointly with their husbands and those women are, on average, two years younger than their husbands).

For the present, most employers expect little change in employee retirement behavior, either because that behavior is governed by continuing financial incentives, or by normative expectations (rather than mandatory retirement rules). But should retirement ages increase, the most common employer response will be to increase retirement incentives.

A significant minority of employers, most likely those with the strongest interest in controlling retirements, appear willing to pay for their preference with better retirement benefits. This apparent willingness to bear higher labor costs may, however, be based on the belief that the marginal cost will not be great, since relatively few employees will delay retirement in the wake of higher or no age limits.

The picture could change dramatically should other major changes in federal retirement policy occur, such as raising the social security retirement age from 65 to 68. It is not at all clear whether employers interested in controlling retirements will accept the resulting older retirement ages, or will assume the cost of replacing all or part of the lost social security benefits with supplemental payments.

(Note: The research data utilized for evaluating the effects of the ADEA Amendments of 1978 on employees and employers are derived from the National Survey of Employee and Employer Response to the 1978 ADEA Amendments. This survey included 6100 randomly selected employees aged 40-69 covered by the Age Discrimination in Employment Act and 5800 employers identified by these individuals. The employee sample is representative of the universe of employees subject to the ADEA. Due to the fact that persons working for firms with fewer than 20 employees, in hazardous occupations or federal employees, were excluded from the sample (and are not covered by the ADEA) the employer sample is weighted toward larger firms with some overrepresentation of manufacturing, professional services and transportation industries. Employees were interviewd by telephone; employers received separate mail questionnaires in the areas of personnel and pension policies.)

Analysis of the survey is divided into two parts. The first part examines the impact of raising the mandatory retirement age on employees' planned retirement ages. This is done in the context of a more general model in which an employee's planned retirement age depends on his income, his pension coverage, his social security coverage, and other factors as well as any mandatory retirement age he may face.

The second part of the analysis examines the impact of raising the mandatory retirement age on the behavior of firms. This question has several specific dimensions. To what extent are firms in compliance with the amendments? How many firms changed their pension and benefit policies in response to the amendments? To what extent do firms expect worker behavior to change as a result of the amendments? And how will firms respond if worker behavior does change?

Detailed overviews of major findings are presented.

Analysis of Employee Retirement Plans

In this section, we analyze the survey data to measure the impact of the 1978 ADEA Amendments on employee retirement plans. We do this in two ways. The first involves simulations based on regression analyses of the survey data. The second involves analysis of an "experiment" in the data itself. These analyses are explained more fully below.

Note that we do not propose to analyze the data through direct tabulations -- which actually count how many people want to retire before age 65. Such tabulations are misleading because people tend to delay their planned retirement age as they grow older.

For example, the regression analyses for men, show that one additional year of age causes a men to increase his planned retirement age by about three months. The survey sample contains men ages 40 and older. To analyze the impact of the ADEA Amendments, we need to look not at their current retirement plans, but at our estimates of their retirement plans when they reach age 59. The regression-based simulation is designed to make these estimates.

The experiment, referred to above, arises in the following way. At the beginning of the survey, employees are asked about the age at which they expect to retire. Later, employees are informed about the ADEA Amendments and the fact that they cannot be forced to retire before age 70. They are then asked to give their retirement age a second time, taking the ADEA Amendments into account. The comparison of the initial estimate and the reestimate, after hearing about ADEA, creates an "experiment" to measure the Amendments' impact.

Principal findings are summarized as follows:

- Men who believe they face an age-65 retirement policy plan to retire, on average, at age 62. Had the same men faced a retirement policy of age-70 or above, we estimate that they would have planned to retire, on average, at age 64.

- When men are faced with an age-65 retirement policy, we estimate that by the time they reach age 59, about 4 percent of the cohort will want to retire at age 66 or higher. Had the same men faced a retirement policy of age-70 or above, about 24 percent of the cohort would have wanted to retire at age 66 or higher though most of these would have retired by age 68.

- The survey data on single women is too unstable to give reliable inferences of the impact of an age-65 retirement on their behavior.

- When married women are faced with an age-65 retirement policy, we estimate that by the time they reach age 59, about 1 percent will want to retire at age 66 or higher. Had these same women been faced with a retirement policy of age-70 or above, about 5 percent would have wantd to retire at age 66 or higher. This relatively small impact arises in part from the fact that women key their retirement decisions to the decisions of their husbands and women are, on average, about two years younger than their husbands. This means most couples will retire at an age that will not bring the wife into contact with a 65-year old limit.

- In practice, 10-15 percent of all sample respondents knew of the existence of a federal law which moved the mandatory retirement age from 65 to 70. In Maine, California, and New Jersey, about 8 percent knew of the existence of state laws which changed mandatory retirement ages.

- Employees were much more aware of the mandatory or expected retirement ages in their firms. In firms that had had no recent change in retirement age policy, 57 percent of men and 48 percent of women correctly identified the firm's retirement age (or the absence of any retirement age) while 10-15 percent of both groups did not know their firm's policy and 20 percent of both groups identified a policy that was too restrictive. In firms that had made a recent policy change (within the last year), about 35 percent of men and 26 percent of women could correctly identify their firm's policy while about 30 percent of both groups identified a policy that was too restrictive.

- When sample respondents were informed of the 1978 ADEA Amendments, only about 8 percent chose to change their retirement age from 65 or less to 66 or more. An equal number chose to reduce their planned age of retirement while about three-quarters of all respondents left their planned retirement age unchanged. We believe this limited result indicated that retirement plans are not something people will quickly change in an interview format. Over time, we expect results to be somewhat larger, particularly for men, as described above.

The remainder of this Review is divided into five sections: Section 1 reviews employees' responses to two questions on their planned age of retirement; Section 2 reviews employees' knowledge of their firm's retirement age policies; Section 3 estimates the determinants of an employee's planned age of retirement and constructs simple simulations to investigate the impact of mandatory retirement; Section 4 examines changes in employee retirement plans when they are informed of the 1978 ADEA Amendments; Section 5 contains a brief conclusion.

1. An Employee's Planned Retirement Age

Throughout this section we are concerned with explaining the determinants of an employee's planned age of retirement. For this reason, we begin with a description of the retirement age variable itself.

Table 1 contains data for men, stratified by age, on the amount of thought they have given to retirement and whether they anticipate or guess their retirement age. The data show that between 75 and 80 percent of all workers have given at least some thought to retirement, a proportion which does not vary much by age. The proportion of men who have settled on an (anticipated) retirement age varies slightly more with age, increasing from 59 percent for men under 50 to 68 percent for men over 50.

Our analysis of these responses raised two issues: the meaning of retirement, and differences in guessed and anticipated responses. We address the meaning of retirement first. E3.01, the question in the employee questionnaire that begins the retirement age section, refers to "how old you expect to be when you retire--either from where you now work or from a future job." At the same time, question E3.20 asks:

> E3.20 As of now, do you expect that you will stop working completely when you reach retirement age or not?

Table 2 below contains the distribution of responses to this question for men ages 54 or less, cross-tabulated by guessed or anticipated retirement age. The data show that most men, regardless of retirement plans, expect to keep working to some extent after their "retirement." This indicates that most respondants interpreted retirement to mean leaving a "main job"--pension acceptance--rather than a stopping of work. As we proceed to analyze the determinants of a person's "retirement" age, this meaning of retirement should be kept in mind.

2. Employee Perceptions of Retirement Policies and Retirement Law

In this section, we examine an employee's knowledge of retirement policies and retirement law. We are interested in three specific items:

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Table 1. Distribution of Anticipated and Guessed Retirement Ages by Amount of Thought Given to Retirement for Men*

(A) Ages 39-50
(N = 1284)

	Devoted at Least Some Thought to Retirement	Devoted Little or No Thought to Retirement
Anticipated Retirement	59%	—
Guessed at Retirement	17%	24%

Total = 100%

(B) Ages 51-60
(N = 1638)

	Devoted at Least Some Thought to Retirement	Devoted Little or No Thought to Retirement
Anticipated Retirement	68%	—
Guessed at Retirement	14%	18%

Total = 100%

(C) Ages >60
(N = 406)

	Devoted at Least Some Thought to Retirement	Devoted Little or No Thought to Retirement
Anticipated Retirement	68%	—
Guessed at Retirement	12%	20%

Total = 100%

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Table 2. Responses of Men, Ages 39-54, on the Question of Whether They Plan to Stop Working Completely After They Reach Retirement Age

Anticipated or Guessed Retirement Age	Number of Responses	Proportion Who Plan to Keep Working After "Retirement"
55 or less	277	68%
56-65	883	55%
66-69	5	80%
70 and above	28	75%

What does the employee know about the retirement age in his own firm?
What does the employee know about the 1978 ADEA Amendments?
What does the employee know about age discrimination laws in his own state? (This question was asked only for residents of New Jersey, California, and Maine).

A priori, we assume that the employee's knowledge is most accurate on the policies of his firm. This implies that the ADEA Amendments work (if they work at all) indirectly by affecting employer policy which then influences employees. The tabulations presented in this section support this assumption.

The data in Table 3 show that about 10 percent of men and 17 percent of women do not know whether their employer has an expected (or mandatory) retirement age, while 27 percent of men and 22 percent of women indicate a retirement age of 65 or less. The remaining three-fifths of the sample indicate their firm has a retirement age for their occupation of 66 or more (concentrated at 70) or no retirement age whatsoever.

In Section 3 we examine the extent to which these percetpions influence employee retirement plans. For the present, we acknowledge that they may have some influence and this leads us to ask how accurate the perceptions are. To begin to answer this question, we cross-tabulate employee responses with the responses of the personnel office in the employee's firm. _A priori_, we believe that policy changes take time to filter down to employees--particularly younger employees--and so we would expect the accuracy of employee knowledge about retirement policy to depend on whether or not the change was recent.

Table 4 compares the employee's response and the personnel officer's response to the existence of a mandatory retirement policy. Included in the table is the percent of employees who correctly identified their employer's policy. The data show that 60-65 percent of men and 50-55 percent of women correctly identify the existence (or non-existence) of a mandatory retirement policy in their firm. This percentage is slightly lower in firms that have made a recent policy change, but the differences between firms that have and have not made a recent change is not sharp. For example, one mistake of importance to this study is an employee's perception that his firm has a mandatory retirement age when, in fact, it does not. Where firms have made no recent policy change, about 18 percent of men and women make this mistake. In firms that have made a recent policy change, only 9 percent of women and men make this mistake. (The reason for this surprising outcome emerges in Table 5.) Firms that have made a recent policy change are typically firms that had a mandatory retirement age of 65 and,

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Table 3. Employee Perception of Firm's Mandatory or Expected Retirement Age

Employer Mandatory or Expected Retirement Age	Number of Responses*	
	Men	Women
0-55	13	7
56-61	34	8
62	59	48
63-65	834	405
66-70	719	335
> 70	21	7
No Retirement Age	1486	991
Don't Know	335	373
Total	3502	2174

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*Excludes missing data.

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Table 4. Firm Retirement Policy Versus Employee Perception of Firm's Policy

Men

A. Firm's That Have Not Made Policy Change Within Last Year

		Employee's Perceptions		
Firm's Policy	Have to Retire	Expected to Retire	Work as Long as One Can	Don't Know
No Mandatory Retirement	160	52	485	84
Mandatory Retirement	218	32	77	20

N = 1126

Percent Correct = 63%

B. Firm's That Have Made Policy Change Within Last Year

		Employee's Perceptions		
Firm's Policy	Have to Retire	Expected to Retire	Work as Long as One Can	Don't Know
No Mandatory Retirement	61	10	37	7
Mandatory Retirement	429	90	182	62

N = 858

Percent Correct = 62%

Women

A. Firms That Have Not Made Policy Change Within Last Year

		Employee's Perceptions		
Firm's Policy	Have to Retire	Expected to Retire	Work as Long as One Can	Don't Know
No Mandatory Retirement	101	38	187	92
Mandatory Retirement	146	18	74	37

N = 793

Percent Correct = 37%

B. Firm's That Have Made Policy Change Within Last Year

		Employee's Perceptions		
Firm's Policy	Have to Retire	Expected to Retire	Work as Long as One Can	Don't Know
No Mandatory Retirement	35	8	31	19
Mandatory Retirement	167	34	119	44

N = 447

Percent Correct = 36%

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Table 3. Summary of Accuracy of Employee Perceptions of Firms' Retirement Policy

	Firms With No Recent Policy Change	Firms With A Recent Policy Change
A. Men		
Correctly States Mandatory Retirement Age	14%	27%
Correctly States the Absence of Mandatory Retirement Policy	43%	7%
Gives a Mandatory Retirement Age That Is Too Low	7%	27%
Gives a Mandatory or Expected Retirement Age When No Mandatory Retirement Exists	19%	8%
Don't Know Firm's Policies	9%	8%
All Other	7%	23%
	100%	100%
	N = 1128	N = 858
B. Women		
Correctly States Mandatory Retirement Age	12%	19%
Correctly States the Absence of Mandatory Retirement Policy	36%	7%
Gives a Mandatory Retirement Age That Is Too Low	8%	23%
Gives a Mandatory or Expected Retirement Age When No Mandatory Retirement Exists	18%	10%
Don't Know Firm's Policies	16%	14%
All Other	10%	27%
	100%	100%
	N = 793	N = 447

in response to the ADEA Amendments, increased it but did not abandon it. In these firms, most employees know that there is a mandatory retirement age (Table 4) but relatively large numbers of employees believe that the age is lower than it actually is (Table 5).

Table 5 expands on Table 4 by examining data on mandatory retirement ages as well as the existence of a mandatory retirement policies per se. Here, the impact of recent employer policy changes is more evident. In firms that have made no change in retirement policy, 57 percent of men and 48 percent of women accurately described their firm's policies, correctly identifying either the retirement age or the absence of any retirement age. Conversely, 26 percent of both men and women perceived policies that were too restrictive. Either they identified a mandatory (or expected) retirement policy where none existed, or they identified a retirement age that was too low.

Where a firm made a recent policy change, overall employee accuracy declined. The proporation of employees who correctly identified their firm's retirement age (or the absence of a retirement age) dropped from 57 percent to 34 percent for men, and from 48 percent to 26 percent for women. Conversely, the proportion of the sample erring by identifying the policy as too restrictive rose from 26 percent to 35 percent for men and from 26 percent to 33 percent for women. (Note also that among firms with recent changes, about one-quarter of both men and women thought their firm's retirement ages were higher than they actually were. These observtions are grouped under All Other).

Table 6 recomputes Table 5 for workers over 55. A priori, we would expect older workers to be more familiar with employer retirement policies, but the proportions in Table 5 (all workers) and Table 6 (older workers) are quite similar.

To summarize the data in Table 5 and 6, we assume that over time, employees become more familiar with recent policy changes and the accuracy of their descriptions reaches the accuracy in the rest of the sample. Given this assumption, the survey data indicate that about three-fifths of all men and one-half of all women have an accurate picture of their firm's retirement age (or the absence of that age) while one quarter of both men and women believe their firm's retirement age is more restrictive than it is.

At the opening of this section, we argued that employees should have better knowledge of their firm's policies than of relevant federal and state law. We now investigate this proposition directly. At the time of the survey, three states--New Jersey, California, and Maine--had laws prohibiting an age 65 mandatory retirement.

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Table 6. Summary of Accuracy of Employee Perceptions of Firm's Retirement Policy for Workers 55+

	Firms With No Recent Policy Change	Firms With A Recent Policy Change
A. Men		
Correctly States Mandatory Retirement Age	13%	39%
Correctly States the Absence of Mandatory Retirement Policy	47%	—
Gives a Mandatory Retirement Age That Is Too Low	1%	17%
Gives a Mandatory or Expected Retirement Age When No Mandatory Retirement Exists	18%	—
Don't Know Firm's Policies	10%	8%
All Other	10%	36%
	100%	100%
	N = 513	N = 251
B. Women		
Correctly States Mandatory Retirement Age	14%	44%
Correctly States the Absence of Mandatory Retirement Policy	43%	—
Gives a Mandatory Retirement Age That Is Too Low	1%	23%
Gives a Mandatory or Expected Retirement Age When No Mandatory Retirement Exists	17%	—
Don't Know Firm's Policies	13%	11%
All Other	12%	22%
	100%	100%
	N = 367	N = 126

As shown in Table 7, knowledge about the existence of state laws in New Jersey, California and Maine is limited. Among survey respondents who lived in those states, only 5 percent of men and 6 percent of women said laws existed which precluded a firm's forcing retirement before age 70. Eighty-eight percent of men and 84 percent of women said they either did not know about such a law or that no such law existed.

Knowledge about federal laws was somewhat higher, with 15 percent of men and 9 percent of women knowing that federal law prohibited a firm from forcing retirement before age 70. (Table 8) Here, too, however, there was much incorrect information, with 71 percent of men and 82 percent of women saying that either they did not know of such a law or that now such law existed. Similar tabulations restricted to workers 55 and older show similar results.

We opened this section with the proposition that employees were far better informed about firm policies than about state or federal law. The tabulations indicate the proposition is correct, and also showed that significant numbers of employees do not know, or are misinformed about actual firm policies. Nonetheless, when we turn to estimating the determinants of employees' retirement plans, it is more reasonable to link these plans to employees' perceptions of firm policies, rather than to firm policies themselves.

3. Estimating the Impact of Mandatory Retirement Rules

In this section, we utilize survey data to estimate the impact of mandatory retirement rules on individual retirement plans. The sample is divided into two groups:

(A) Persons who say they face an expected or mandatory retirement age of 65 or less.

(B) Persons who say they face an expected or mandatory retirement age of 70 or more (including no mandatory retirement).

We use each group to estimate a separate model of the determinants of a person's planned retirement age where these determinants include the person's demographic characteristics, his financial circumstances, and certain characeristics of his firm's pension plans. We assume that when this model is estimated for persons in Group A, its coefficients embody the impact of facing a retirement age of 65 or less. When the model is estimated for persons in Group B, its coefficients embody the

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Table 7. Knowledge of State Age Discrimination Laws Among Residents of New Jersey, California and Maine

E3.26 To the best of your knowledge, does the state in which you work have a law about employers making their workers retire by a certain age?

E3.27 (if yes to E3.26) According to the state law, what is the earliest age at which you can be made to retire?

(combined responses to both questions)

	Men	Women
No Law or Don't Know About Law	88%	84%
Yes, There is A Law		
Don't Know Age	4%	1%
Age < 70	3%	9%
Age 70 or More	5%	6%
	100%	100%

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Table 8. Knowledge of Federal Age Discrimination Laws Among All Sample Respondents

E3.29 And to the best of your knowledge, does the federal government have a law about employers making their workers retire by a certain age?

E3.30 (if yes to E3.29) According to that federal law, what is the earliest age at which you can be made to retire?

(combined responses to both questions)

	Men	Women
Don't Know	28%	41%
No Such Law	43%	41%
Yes, There is A Law		
Don't Know Specific Age	5%	1%
Age 65 or Less	8%	7%
Age 70	15%	9%
More Than 70	1%	—
	100%	100%

impact of facing a retirement age of 70 or more. We then use the two estimated models to estimate two, separate, distributions of retirement ages for the same people. A comparison of these two distributions gives the impact of an age-65 retirement rule. We hypothesize a simple "target income" model in which many men want to retire in their early sixty's, subject to the constraint that they have an adequate income at retirement. If the model is correct, and if most men in the sample have adequate sources of retirement income, even a mandatory retirement age of 65 will not pose a binding constraint in many cases.

To test this model, we begin with independent variables describing the individual's demographic characteristics, his financial circumstances, and certain attributes of his pension coverage. Demographic characteristics include the individual's age, education, the presence of a child who is less than 12, tenure on the current job, and a variable denoting persons who are professional, technical or sales (white collar) workers. Financial circumstance variables include the level of retirement income from all sources which the person expects to receive, a variable identifying people who are reasonably confident that their retirement income will provide a comfortable living, a variable identifying people who expect to receive social security, and a variable identifying people who own their own home. The description of the person's pension situation is based on a set of six, mutually exclusive (0,1) variables to describe the following situations:

- No pension
- Unsure of pension coverage and/or entitlement age
- Covered by a pension and full benefits at 60
- Covered by a pension and full benefits at 61-62
- Covered by a pension and full benefits at 63-65
- Covered by a pension and full benefits at 66 or more.

Regressions explaining planned retirement age for men appear in Table 9. The sample of men is divided into two groups: those who say their firm has a mandatory or expected retirement age of 65 or less (column A) and those who say their firm has a retirement age of 70 or more (column B). In most respects, the two regressions are similar, and support the target income model sketched above. In what follows we discuss those results that are statistically significant.

Table 9. Regressions Explaining Men's Planned Retirement Age (t Statistics in Parenthesis)

	Group A Men Who Face Age 65 Retirement	Group B Men Who Face Retirement at Age 70 or More
Age	1.813 (1.35)	-1.667 (1.83)
Age^2	-.016 (1.44)	.020 (2.15)
Years of Education	.093 (.30)	.037 (.47)
Expected Retirement Income/10,000	-.443 (3.89)	-.283 (2.41)
Certainty of Comfort of Retirement Income*	-.437 (1.05)	-1.04 (2.92)
Expect to Receive Social Security*	4.092 (4.99)	3.01 (4.49)
Tenure on Current Job	-.080 (3.40)	-.127 (6.73)
Professional, Technical or Sales Worker*	1.138 (2.26)	.961 (2.32)
Youngest Child Less than 12*	.603 (1.17)	.873 (2.08)
Owns Own Home*	-.711 (.97)	-.585 (1.07)
No Pension*	.606 (.67)	-.384 (.33)
Pension but Unsure of Entitlement Age*	-1.27 (1.36)	-.781 (1.23)
Entitlement at 60*	-2.641 (4.03)	-2.122 (4.02)
Entitlement at 62*	-.797 (1.30)	-.310 (.93)
Entitlement at 64 or More**	-476 (.30)	-.261 (.17)
Early Retirement Provision*	-1.06 (1.88)	.097 (.22)
Constant	10.159	94.117
N	381	664
R^2	.29	.23

---

*(0,1) variable.

The coefficient on expected income is between -.3 and -.4 which means that each extra $2,000 of expected retirement income causes a reduction in planned retirement age of about one month. The coefficient on the comfort provided by this income lies between -.5 and -1.0. This means that persons who are reasonably confident that their retirement income will provide them with a comfortable living will retire six months to one year earlier than other people who don't have this expectation. The coefficient on expected social security receipt lies between 3.0 and 4.0, and this means that persons who expect to receive social security will postpone their retirement by three to four years, all other things constant. This postponement is consistent with an idea of target income model in which men would like to retire quite early but will keep working until they can retire with social security.

Similarly, persons covered by a pension which provides full benefits at age 60 retire between two and two-and-one-half years before workers who receive full pension benefits at age 65.

Certain demographic variables have similar impact across both equations as well. In each equation, one additional year of tenure on the job (holding age constant) reduces planned retirement age by a little more than a month, a relationship which may reflect the role of years of service in determining the level of pension benefits.[8] Being a professional, technical, or sales workers causes postponement of retirement by about a year. Certain other variables (e.g., having a child under 12) are significant in one equation but not the other.

What difference does a mandatory retirement rule of age 65 or less have on planning a retirement age?

In this methodology, we assume that the estimated coefficients of the Group A regression in Table 9 embody the behavior of persons faced with an age-65 retirement, while the estimated coefficients of the Group B regression embody the behavior of persons faced with a retirement age of 70 or above. By applying the Group B coefficients to persons in Group A, we can estimate what their retirement plans would have been had they not been faced with retirement age of 65. Similarly, by applying Group A coefficients to persons in Group B, we can estimate what their retirement plans would have been had they been faced with a retirement age of 65. By comparing these counter-factual distributions with the actual distributions, we can estimate the impact of mandatory retirement.

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[8] We investigated a number of other explanations of the significance of job tenure without success.

Table 10 contains the distribution of retirement ages for the 413 men who said they faced a retirement age of 65 or less. Column A of the table contains estimates of the men's planned retirement ages when the men themselves reach age 59. The estimates assume that the men continue to face an age-65 retirement. Column B of the table contains estimates of the same men's retirement plans at age 59, assuming they faced a retirement age of 70 or above (including no mandatory retirement).

The differences in the two distributions are significant. The estimates in Column A show that aging the sample to age 59 (while retaining an age-65 retirement policy) increases their planned retirement age by about 2 years. But only 4 percent have planned retirement ages 66 or more. By contrast, Column B shows the plans of the same men assuming they face a retirement age of 70 or above, and here, 22 percent of the men plan to retire at ages 66-69 (with most retiring at 66 or 67).

These results are consistent with the target income model postulated above. For most men, the combination of the desire to retire at an early age, coupled with current pension and social security entitlement ages mean they will want to retire at 65 or less. An age-65 retirement rule does not influence their behavior. But for a significant minority of men (e.g., 20%), an age-65 rule does limit behavior and their retirement decision would be postponed by one or two years if the rule were relaxed.

Table 11 performs similar calculations for men who actually faced a retirement age of 70 or above. Similar differences emerge. Column B of Table 11 shows the estimated distribution of planned retirement ages when the men are "aged" to age 59. We estimate that 24 percent of the men will plan to retire at age 66 or above (with most retiring at age 66 or 67). Column A of Table 10 reestimates planned retirement ages assuming these same men faced retirement at age 65. Here, only 4 percent of the men have planned retirement ages above 65.

To better understand the results, note that in Table 10, the retirement plans of persons in Column B are about 2.2 years higher (on average) than the retirement plans in Column A. Recall that these two columns represent the retirement plans of the same people (with the same independent variables) estimated using two different regression equations. Thus, the 2.2 year postponement of retirement plans comes from differences in behavior induced by facing an age-65 retirement, rather than from any differences in pension coverage, occupation, or other independent variables.

Table 10. Simulated Retirement Plans of Men Who Face 65-Year Retirement Rule (Men in Group A in Table II-14)

	A Aged Distribution of Actual Responses (Assuming Men Are All Age 59, Rather Than True Age)*	B Reestimated Distribution (Assuming Men Were Facing Retirement Age of 70 or Above, Rather Than 65 or Less**
< 59	8.4	1.6
≤ 59	8.2	2.2
60	11.1	4.8
61	15.7	3.4
62	21.8	12.1
63	15.5	15.0
64	10.2	19.1
65	5.1	16.5
66	2.9	14.5
67	1.0	6.8
68		3.1
69		.7
	100%	100%
Mean	61.6 Years	63.8 Years

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*Based on Group A Regression in Table II-14.
**Based on Group B Regression in Table II-14.

Table 11. Simulated Retirement Plans of Men Who Face Retirement Rule at 70 or Above (Men in Group B in Table II-14)

	A Reestimated Distributions Assuming Men Were Facing Retirment Age of 65 or Less Rather than 70 or Above *	B Aged Distribution of Actual Responses (Assuming Men Are All Age 59 Rather Than True Age) **
< 59	9.9	1.0
≤ 59	8.8	2.0
60	11.9	5.4
61	14.6	6.7
62	17.0	11.3
63	16.3	13.7
64	11.0	17.3
65	6.7	19.1
66	3.5	12.6
67	.3	8.5
68		2.4
69		
	100%	100%
Mean	61.7 Years	63.9 Years

---

*Based on Group A Regression in Table II-14.

**Based on Group B Regression in Table II-14.

The magnitude of these differences can be seen by comparing the estimated plans of person's who actually faced such a rule (Table 10, Column A) with person's who actually did not face such a rule (Table 11, Column B) and again, the second group wants to retire about 2.3 years later than the first.

In summary, the perception of an age-65 retirement rule reduces the average planned age of retirement by about 2.2 years and decreases the number of men expecting to retire after age 65 by about 80 percent.

Because these results are retirement plans, rather than actual retirement behavior, they should be treated with caution.* Nonetheless, it should be noted that they are broadly consistent with the results of other parts of the study which were based on actual, pre-ADEA behavior. In one set of estimates based on the Retirement History Survey, we examined the retirement behavior of workers aged 62-64 in 1973 who were faced with mandatory retirement. The findings show that over the next two years, 81 percent of this group had actually retired while they estimate that about 60 percent of the group would have retired had the group not faced mandatory retirement. When we examine similar statistics from Table 10 we find that among workers aged 62-64 who face an age 65 retirement, 71 percent will retire over the next two years, while 45 percent would retire if they did not face mandatory retirement. In both cases, facing an age-65 retirement increases the number of retirements among the group by about 20-25 percentage points.

To this point, we have argued that differences in Group A and Group B retirement plans come from facing (or not facing) an age-65 retirement. Before leaving these results, it is worth examining a few of the details of this relationship. In particular, our model contains two potential incentives for retirement at a young age: a variable describing full pension entitlement at age 60, and a variable describing the presence of early retirement provisions. As shown in Table 9, the impact of both variables is larger when the individual is faced with an age-65 retirement age (Group A) than when he is not (Group B). In the Group A equation, pension entitlement at age 60 reduces retirement age by about 2.6 years compared to 2.1 years for Group B. Similarly, early retirement provisions in the pension plan cause retirement ages to be reduced by one year in the Group A equation, but have no impact in Group B. These results indicate that a mandatory retirement age affects not only retirement at that age, but incentives in the years leading up to that age as well.

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* For example, all of the men in Group A say they face an age-65 retirement, but by law, this is illegal.

In determining the retirement plans for single women, we must conclude that estimates of the retirement plans of single women are too statistically unstable to provide a basis for measuring the impact of mandatory retirement rules.

Estimates for Married Women

In the case of working married women, we found we could improve our model's predictive power if we included variables describing the retirement situations of their husbands. Three additional variables were examined:

- A variable describing whether the husband was in poor health.
- A variable measuring the woman's estimate of the number of years between the date of the interview and the husband's retirement date.
- A variable describing whether the husband was covered by a pension.

The important feature of the estimate for married women is their early retirement age. When we estimate the plans these women will make at age 59, the large majority say they want to retire before age 65 whether or not they face an age-65 retirement rule. When the age-65 retirement rule is lifted, the proportion of women who desire to work after 65 increase, from about two percent of the sample to five percent of the sample. While this change is sharp in proportionate terms, it does not have a great impact on the labor force per se.

The limited impact of age-65 retirement upon women's behavior in part reflects the desire of a woman to retire when her husband does, together with the fact that women in the sample are, on average 2 years younger than their husbands. Women in the sample average 48.7 years in age while their spouses average 50.5. Even with the lifting of mandatory retirement, our estimates show that most men will have retired by age 66 or 67 and simultaneous retirement by wives will not involve hitting an age-65 limit.

4. Determinants of Changes in Retirement Plans

To this point, we have been discussing a model by which the 1978 ADEA Amendments influence retirement decisions indirectly through firm retirement policies. In this section, we examine more direct impacts of the ADEA Amendments on individual decisions. Data in the survey permit such examinations in two ways. The survey establishes whether or not a person has changed his planned age of retirement in recent years. If the person has made a change, the survey asks for the reason behind the change. The ADEA Amendments are coded separately as one possible reason for the change. The small number of people who know about the ADEA Amendments to begin with suggests the number reporting adjusted retirement plans in response to the ADEA Amendments should be quite small.

The second examination of direct ADEA impacts involves the results of an "experiment" conducted in the survey itself. In the survey, questions test the respondent's knowledge about federal and (if applicable) state retirement law. Question E3.31 reads:

> E3.31 Actually, as of January of this year, there is a federal law which says most workers cannot be made to retire against their wishes before they are 70. Also, state laws in California, New Jersey, and Maine say that no one can be made to retire against their wishes because of their age, even if they are over 70. Of course, people who want to retire before 70 can do so at any age, and if they are eligible, collect Social Security--or any other pension for which they are eligible. Taking all this into account, if you had to make up your mind today as to what age you will retire, at which age would that be?

The difference between a person's original retirement age and this re-estimated retirement age can be looked at as a crude experiment to measure the ADEA Amendment's impact. The remainder of this section will be divided into three parts. In the first, we will tabulate the ADEA-induced changes in retirement age which occurred prior to the survey, the first source of data cited above. In the second part of this section, we will tabulate the results of the ADEA "experiment" described above. In the third part, we summarize unsuccessful attempts to analyze the experiement using regression and logit analysis. We conclude from these attempts that there is no systematic pattern to persons who reestimated their retirement age.

ADEA-Induced Adjustments Made Prior to the Survey

As suggested at the beginning of this section, the number of persons who say they changed their retirement plans directly on response to the ADEA Amendments is very small. Table 12 contains a summary of this information.

Table 12. Responses of Persons Who Changed Their Retirement Age in the Last "Two or Three Years" (Men and Women Grouped Together)

E3.11	Why Did You Lower Your Planned Retirement Age?	
	Change in Mandatory Retirement Law?	13
	Other	157
	Not Applicable or Missing	5567
E3.12	Why Did You Increase Your Planned Retirement Age?	
	Change in Mandatory Retirement Law?	13
	Other	311
	Not Applicable or Missing	5413
E3.13	Why Did You Decide to Retire After All?	
	Change in Mandatory Retirement Law?	—
	Other	18
	Not Applicable or Missing	5719
E3.07	Why Did You Decide Not to Retire After All?	
	Change in Mandatory Retirement Law?	3
	Other	105
	Not Applicable or Missing	5629

To put Table 12 into perspective, begin with the fact that the survey contains 5,737 responses, of which 112 did not give any anticipated or guessed retirement age. Of the 5,625 persons who did give an intitial retirement age, 620 (or 11 percent) report having made a recent change in their retirement plans. Of this number, 29 report having made their changes in retirement plans in response to the ADEA Amendments. This number is divided about equally between people who postponed their retirement (16 persons) and those who lowered their retirement age (13). The total figure of 29 persons represents one-half of one percent of the initial 5,625 persons.

In summarizing these figures, we should recognize that the survey was conducted about a year after the ADEA Amendments took effect, a short time in which to gain recognition. Moreover, the direct impact of the Amendments as measured in this question remains less likely than an indirect impact working through employee perceptions of company policies. Nonetheless, the data in the survey indicate that the short-run, direct impact of the ADEA Amendments upon individual behavior was almost nonexistent.

Tabulations from the Survey "Experiment"

We turn next to the results of the survey "experiment" described above--i.e., the way in which employees' estimated retirement ages changed when they were informed of the ADEA Amendments and corresponding state laws.
A priori, we expect that knowledge of the ADEA Amendments would, if anything, cause a person to postpone expected age of retirement--in particular, to increase it to a level above age 65. In practice, the pattern of change is more complicated. As shown in Table 13, about 6 percent of men and 9 percent of women do postpone their retirement from an age younger than 65 to an age over 65. But roughly equal proportions of men (7 percent) and women (8 percent) decrease their retirement age in the reestimation. Moreover, the proportion of both men and women who increase their retirement age to something over 65 bears no relationship to their previous perceptions of their firm's retirement policies.

Among those who did change their retirement age, the most frequent adjustment was from age 62 to age 65, a change tabulated under "Other Increases" in the table. As shown in the table, this kind of change was most frequent among persons who originally thought their firm had a retirement age of 65 or less. In practice, however, about 90 percent of these persons thought their firm had a retirement age of exactly 65, and so moving their retirement plans from 62 up to 65 seems to have little to do with mandatory retirement regulations per se.

PART I

Table 13. Changes in Retirement Age When Given ADEA Information[1]

A) Men

Perceptions of Firm Policy	Decreased Retirement Age	Same Retirement Age	Increased From Below 65 to Above 65	Other Increases	Total	N
Perceived ≤ 65	8%	74%	5%	13%	100%	86
Perceived ≥ 66	6%	83%	6%	5%	100%	67
Perceived No Retirement Age	7%	79%	6%	8%	100%	135

B) Single Women

Perceptions of Firm Policy	Decreased Retirement Age	Same Retirement Age	Increased From Below 65 to Above 65	Other Increases	Total	N
Perceived ≤ 65	7%	70%	9%	14%	100%	164
Perceived ≥ 66	7%	76%	8%	9%	100%	138
Perceived No Retirement Age	10%	71%	11%	8%	100%	391

C) Married Women

Perceptions of Firm Policy	Decreased Retirement Age	Same Retirement Age	Increased From Below 65 to Above 65	Other Increases	Total	N
Perceived ≤ 65	8%	69%	9%	14%	100%	254
Perceived ≥ 66	7%	77%	7%	9%	100%	175
Perceived No Retirement Age	10%	71%	10%	9%	100%	473

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[1] Sample includes persons of all ages. Excludes persons who did not know about firm retirement policy.

Rather, we speculate the increase was triggered by questions concerning the age of pension entitlement, social security receipt, and other matters, though detailed tabulations have not been able to prove this assumption one way or the other.

In summary, the results of the "experiment" indicate that knowledge of the ADEA Amendments and other factors caused about 6 percent of sample men and 9 percent of sample women to increase their retirement age from something under 65 to something over 65. The emphasis on other factors is important, however, since the proportion of persons making such adjustments was independent of whether the person had originally thought his firm had a retirement age of 65, 70, or thought his firm had no retirement age at all.

Exploratory Regression Models

The data suggested perceptions of mandatory retirement had little impact on how a person changed his retirement age when informed about the 1978 ADEA Amendments. To test this idea more fully, we ran a series of linear probability models and multinomial logit models to see whether better predictions of changes in retirement ages could be obtained when demographic variables, pension variables and retirement age variables were all controlled as well. In general, the models were ineffectual.

When all other factors are held constant, the fact that a person thought his firm had an age-65 retirement increases the probability that he will reestimate his retirement age above 65 by about .03-.04. In both cases, the coefficients that produced this effect are weakly statistically significant, but the effect itself is quite small. More generally, neither the linear probability model nor the logit model did a good job of explaining which people reestimated their retirement plans and which didn't.

The failure of the models should not obscure the basic patterns in the data. First, between 70 and 80 percent of all groups in the sample kept the same retirement age, even when informed of the ADEA Amendments. This should not be surprising. By their own description, most of the persons in the sample had devoted at least some thought to retirement and were unlikely to make radical changes on the basis of an interviewer's questions.

Over time, their reactions may change. The regression results in section 3 suggest persons will be revising their plans upward while they will become more aware that their firm does not require retirement at age 65. The simulations in section 3 suggest that together these results will cause them to extend their retirement date by one or two years. This process, however, takes time. It would show up in the survey only if large numbers of respondents felt heavily constrained by an age-65 retirement rule at the time of the interview. Since these respondents are typically aged 45-50, that situation is unlikely and this accounts for the experiment's relatively weak result.

5. Conclusions

In this part of the analysis, we have examined the impact of age-65 retirement rules upon employee retirement decisions. In reality, such rules were made illegal by the 1978 ADEA Amendments but our estimation was still possible because 25 percent of the survey sample believed their firms had a retirement policy of age 65 or less.

We found that an age-65 retirement policy had a significant impact on the retirement plans of men. In our sample, most men followed a kind of "target income" model in which they retired when they were able to accumulate an adequate retirement income. For most men, this meant retiring before age 65. But a significant minority (about 20%) wanted to continue working after 65 and for men, mandatory retirement acted as a kind of "backstop" to pension and other financial incentives. In particular, an age-65 retirement policy reduced the average planned retirement age from about 64 to 62, and it reduced by 20 percent the number of persons who said they wanted to retire after 65. Impacts for other groups were harder to measure. Results for single women were too unstable to draw firm conclusions. Results for married women showed little impact, largely because these women keyed their retirement decisions to the retirement of their husbands since husbands were about two years older than their wives, these joint retirements typically occurred before the wife turned 65.

When persons were informed about the 1978 ADEA Amendments, about 8 percent changed their planned retirement age from something under 65 to something over 65 while an equal number decreased their retirement age in one way or another. Both the increases and the decreases had little to do with whether a person thought his firm had a retirement age of 65, 70 or no retirement age at all, and the changes were also uncorrelated with other individual characteristics.

This result supported the idea that retirement plans depended on the age of pension entitlement, the age of social security entitlement and other financial variables. In this context, a person's ans er was unlikely to change in response to an interviewer's questions.

Analysis of Employer Responses to the 1978 ADEA Amendments

Summary

This section addresses the impact of the 1978 ADEA Amendments on employer retirement policy by analyzing the employee-based survey data collected from older workers' personnel officers and pension plan sponsors. Given the limited direct impact of the Amendments (only 15 percent of older workers had heard about the Amendments and less than 1 percent had consequently changed their retirement plans) and the relatively stronger influence of financial variables on employee retirement plans discussed previously, most of the near term effects of the Amendments are likely to be felt indirectly through employer policies. However, employers may have policy agendas of their own which are not necessarily in concert with the goals of federal policy. While most employers with mandatory retirement rules would be required to raise their age limit to age 70 to minimally comply with federal law, and that is what 87 percent of those changing policy due to the Amendments did, the considerable opposition voiced by many business spokespersons during consideration of the amendments suggested that they might attempt to mitigate the effects of a higher age limit by changing other policies.

If employers wish to influence the retirement behavior of their employees and, in fact, rationally construct personel management policies and benefit incentives to achieve the desired result--and it is not at all clear that they do--then employers' response to the ADEA Amendments will be predicated on current employee retirement behavior, their predictions of changes in retirement behavior, and the impact of that behavior on the firm.*

Employees co-workers were bound to be retiring relatively early, on average, particularly if they were subject to an age limit. Among those subject to an age limit, 43 percent had persons in their occupation retiring by age 61, 63 percent by age 62, and 79 percent by age 64, on average. Few changes were expected in that pattern over the near term and only 7 percent of the older workers subject o an age limit were expected to have co-workers retiring at ages older than 65. The relatively early retirements were in response to substantial financial incentives to early retirement offered by their employers, including pension plans with young normal retirement ages, payment of full accrued early retirement benefits, and continuation of company-paid insurance after retirement. There appeared to be little reason for employers to alter their policies in the short term. However, the question arose concerning whether believed lack of change in employee retirement behavior was the result of policy changes made prior to the survey.

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* The Department intends to initiate research to ascertain the degree to which employer personnel and benefit policies systematically influence employee retirement behavior.

Several specific issues raised during hearings on the Amendments were addressed by the study. Spokespersons for several large companies contended that should large numbers of workers postpone retirement, labor costs would rise dramatically if continued pension accruals and equal levels of health/welfare benefits must be offered workers over age 65. The private sector representatives asked for a judgement of whether employers would be required to provide such benefits under the provisions of the Amendments in conjunction with ERISA. The response was that discontinuing pension accruals at age 65, and/or providing lower levels of health/welfare benefits to older workers would not be in violation of present ERISA regulations or the ADEA Amendments. Consequently, firms could adjust benefits by either liberalizing financial incentives to retirement, or by reducing the marginal gain from continued work.

A number of policymakers have expressed concern that large numbers of employers who currently permit continued pension accruals would discontinue them subsequent to the passage of the ADEA Amendments. The findings from this study suggest that the employers of very few older workers (6 percent) would even recommend that the firm consider such a move.

Another major area of concern to legislators during consideration of the Amendments was the potential impact on formal performance evaluations. It has been argued that mandatory retirement rules serve as a substitute for effective performance evaluations, which protects both employers and employees from the risks of declining productivity that may occur with age.

If indeed mandatory retirement rules did substitute for effective performance evaluations, it was feared that increasing the age, or eliminating mandatory retirement, could lead to stricter evaluations of performance at all ages, with the unintended consequence that more older employees would be dismissed before retirement. The findings of this study suggest that formal performance evaluations, rather than acting as a substitute for a mandatory retirement policy, more often operate in conjunction with one. Employees subject to mandatory retirement and formal performance evaluations were no more likely than those subject only to performance evaluations to have to have evaluations made more stringent in the near future.

The other major argument against raising the age limit or eliminating mandatory retirement was that age limits were needed to assure jobs and promotional opportunities for younger workers. Employers of workers subject to an age limit did believe that mandatory retirement rules were more important in this regard than as a simple way to remove unproductive older workers.

Although approximately 50 percent of workers' employers believed the cost of labor would increase if significant numbers of older workers postponed retirement to age 70, the employers of workers subject to an age limit were four times more likely to believe costs would decrease as other employers. A surprising 21 percent in manufacturing subject to an age limit, and 34 percent in the largest firms had employers believing costs would decrease.

It would appear that assuring promotional opportunities is an overriding concern for some employers. These employers are not only willing to use mandatory retirement rules, but also relatiely generous benefits to achieve that end.

Given the relatively young current retirement ages, little expectation that retirement ages will change, substantial offerings of incentives to early retirement, and policy changes already accomplished, relatively few older workers can expect additional changes in their pension or health and welfare benefits in the near future. If personnel officers' and plan sponsors' suggested recommendations for change were implemented, existing benefits would be liberalized, new types of health/welfare insurance coverage would be provided, or costs would be shifted more toward the company. However, less than half the recommendations for changing pension benefits were actually under active consideration by the organization, and fewer than 30 percent of the recommendations were being considered as a result of ADEA. The short-term impact of ADEA on employee benefits thus appears to be quite limited.

The following sections address employer responses in more detail, beginning with an analysis of the impact on mandatory retirement policies in Section 1 and current retirement behavior, inducements currently offered, the function of mandatory retirement rules and anticipated employee response in Section 2. These sections form a background against which recently accomplished and anticipated policy changes are addressed in Section 3. Section 4 analyzes what impact there may be on the firm should large numbers of older workers postpone retirement to age 70 and what employers might do in that event. Section 5 presents a summary of findings and conclusions.

1. The Impact of ADEA on Mandatory Retirement Policies

By the time of the survey, more than 95 percent of the affected older employees were working for firms in compliance with the provisions of ADEA. Table 14 shows that 51.4 percent of workers were subject to a mandatory retirement age of 70 or older, and 45.6 percent were not subject to mandatory retirement in 1980. Only 3 percent of employees were subject to a mandatory retirement age below 70 at survey time, and some of them were likely in occupations exempt from the provisions of ADEA or where age is a bona fide occupational qualification. This situation represents a change in policy for over 53 percent of workers during the last few years.

The great majority of workers subject to a mandatory retirement policy prior to enactment of the ADEA Amendments remained subject to an age limit at the time of the survey. As table 15 shows, the preponderant response was to raise the mandatory retirement age to 70 rather than eliminate mandatory retirement (80 percent), although a substantial minority of older workers subject to a new policy (18.8 percent) may now work as long as they are able.

Personnel officers were asked why the firm's mandatory retirement policy was altered. When responses to this question were tabulated, ADEA was found to have been responsible for nearly all recent changes in mandatory retirement policy. The figures in Table 16 show that the employers of 70 percent of employees subject to altered mandatory retirement policies cited ADEA as the sole reason for the change, and an additional 12 percent said ADEA was at least partly responsible. A total of 44 percent of all older workers were subject to new mandatory retirement policies at least partly due to ADEA.

When policy changes were cross tabulated against the reasons given for the most recent change, the ADEA amendments were found to be at least partly responsible for 90 percent of the increased mandatory retirement ages and 63 percent of the eliminations. Thirty-eight percent of all older workers were subject to older age limits and 6.4 percent had their age limit removed because of ADEA.

Nearly 12 percent of the workers subject to a new mandatory retirement policy had mandatory retirement eliminated due to ADEA. This would suggest that their employers either anticipated future legislative action on mandatory retirement, or felt that there was no difference between using age 70 and not having mandatory retirement rules.

PART I

Table 14. Mandatory Retirement Policies Older Workers Were Subject to at the Time of Survey

Mandatory Retirement Age	Number of Older Workers	Percent	Cumulative Percentage
55	1	*	*
60	10	0.3	0.4
62	1	*	0.4
63	5	0.2	0.5
65	69	2.2	2.7
66	3	0.1	2.8
67	3	0.1	2.9
68	4	0.1	3.0
69	1	*	3.0
70	1593	51.0	54.0
71	4	0.1	54.2
72	4	0.1	54.3
75	2	0.1	54.4
No MRA	1423	45.6	100%
Don't Know	1	*	100%
Total	3124	100%	

Table 15. Current and Prior Mandatory Retirement Policy for Employees Whose Employers Recently Made a Change in Policy

Change in Policy (Prior MRA	to	Current MRA)	Number of Older Workers	Percent
60	to	65	1	0.1
62	to	65	1	0.1
63	to	60	1	0.1
65	to	70	1238	73.6
66	to	70	6	0.3
67	to	70	31	1.8
68	to	65	1	0.1
68	to	70	58	3.5
70	to	65	2	0.1
No MRA	to	70	27	1.6
Not Asked	to	No MRA	316	18.8
Total			1682	100.0%

Table 16. Reasons Cited By Workers' Employers for the Most Recent Change in Mandatory Retirement Policy

Reason	Number of Older Workers	Percent
ADEA Only	1188	70.4
ADEA and Other	208	12.3
State Law Only	114	6.8
Other	177	10.5
Total	1687[1]	100%

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[1] Numbers include employees whose firm's eliminated mandatory retirement prior to 1974.

Nearly half the older workers in the sample were not subject to a new mandatory retirement policy, mainly because their employer's policy was already in compliance with the ADEA Amendments. Since elimination of mandatory retirement was the goal of some framers of the Amendments, Table 17 was prepared to show whether the size of the employer was associated with the likelihood that employees would have mandatory retirement rules rescinded.

The table shows that employees of the smallest firms were least likely to have been subject to mandatory retirement before ADEA (approximately 25 percent), and that incidence of coverage by mandatory retirement rules increases with the size of the employer until nearly 91 percent of workers in the largest firms had been covered by such rules. By 1980, only 21 percent of employees of the smallest firms were subject to an age limit, but the proportion increased to 86 percent of those working for the largest firms. Workers previously subject to an age limit in the largest firms were also the least likely to have the rules recinded. The chances that other workers previously subject to mandatory retirement would have the rules eliminated were similar in magnitude regardless of the size of the employer.

2. Anticipated Employee Responses, and the Function of Mandatory Retirement Rules

A priori it is reasonable to assume that employers have not and will not adjust their retirement policies in a vacuum. Rather, rational responses will be made in the context of numerous variables, including recent employee retirement behavior, the current incentive structure influencing that behavior, employer beliefs concerning the function of mandatory retirement, and anticipated changes in employee retirement behavior. This section discusses each of these topics in turn, providing a backdrop for the subsequent sections dealing directly with policy changes that may have already been made by survey time and those under active consideration.

Recent Retirement Behavior

Information on co-workers' recent retirement behavior is provided by responses to personnel questionnaire item P. 11 which asked:

> For your employees in the occupation(s) listed on the cover of this booklet, what was the estimated average age of retirement in 1977 and 1978?

PART I

Table 17. Percent of Older Workers Whose Employer Changed Mandatory Retirement Policies, By Firm Size

Changes in Employer's Mandatory Retirement Policy	Number of Employees					
	Fewer than 200	200-999	1,000-4,999	5,000-29,999	30,000-99,999	100,000 And Over
(1) No MRA Since 1976	74.0	46.9	26.4	20.7	16.6	9.5
(2) Eliminated MR Since 1976	3.3	6.3	12.1	10.8	14.1	4.5
(3) Retained or Adopted a MRA[1]	21.4	44.9	60.2	67.4	69.3	86.1
Unknown	1.4	1.8	1.3	1.1	0.0	0.0
Total	100% (646)	100% (599)	100% (553)	100% (610)	100% (368)	100% 100% (537)
Likelihood a Covered Worker Would have MRA Eliminated [2÷(2+3)]	13.4	12.3	16.7	13.8	16.9	5.0

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1. Eighty percent of these firms raised their MRA to age 70.

The responses are shown in Table 18.

One third of the older workers had no co-workers retiring during the two-year period. This is not surprising since more than 20 percent of the older workers (646) were employed by firms with fewer than 200 full-time-equivalent workers in all occupations. Approximately thirty percent had co-workers recently retiring, on the average, at age 62 or earlier, and 10 percent had co-workers retiring before reaching age 60.

When only those with at least one recently retiring co-worker are considered, the results are even more startling. Nearly 20 percent had co-workers retiring before age 60, and more than 55 percent retired, on average, by age 62. Fewer than 6 percent had co-workers retiring at ages older than 65. These results suggest a strong trend to relatively early retirement, or more accurately pension acceptance.

Employees with no mandatory retirement were more than twice as likely to have had no co-workers retire recently than other employees (50 percent versus 21 percent), and when co-workers did retire, they were half as likely to retire below age 62 (21 percent versus 43 percent) but twice as likely to retire at 65 or older (41 percent versus 21 percent).

This outcome would suggest that mandatory retirement rules significantly affect employee retirement behavior. However, the results of the overall research study indicate that other variables, particularly financial variables had a much stronger effect on retirement behavior than mandatory retirement rules *per se*. The next subsection indirectly explores financial variables through the retirement inducements currently offered older workers.

Existing Retirement Inducements

The data concerning inducements offered to employees at the time of the survey indicate that the three most commonly offered were continuation of insurance after retirement, retirement counseling, and no reduction in retirement benefits. When inducements offered by employers with and without mandatory retirement were compared across industries, employees subject to an age limit were twice as likely to be offered continuation of insurance, counseling, and unreduced retirement benefits, as employees not subject to mandatory retirement. This finding is consistent with the hypothesis that some employers use mandatory retirement as a backstop to catch those employees who do no respond to incentives by retiring before the age limit.

PART I

Table 18. Percent of Older Workers with Co-workers Recently Retiring at Various Ages in 1977 and 1978

Co-workers Average Retirement Age	Number of Older Workers	As a Percent of All Older Workers	As a Percent of Those With Co-workers Retiring
40 to 59	330	10.3	18.6
60 to 61	305	9.5	17.1
62	345	11.0	19.4
63 to 64	310	9.9	17.4
65	385	12.3	21.7
66 and Over	104	3.3	5.8
None Retired	1065	34.0	100%
Don't Know	63	2.0	(1779)
No Response	218	7.0	
Total	3125	100%	

Data on current provisions for postponed retirement were derived from pension plan sponsor items which asked:

> Does the pension or retirement plan listed on the cover of this booklet currently include provisions for postponing retirement (late retirement)?
>
> Which of the following types of provisions for postponing retirement are contained in the current plan?
>
> Same benefits as though retirement occurred at age 65 or normal retirement age;
>
> Employees continue to accrue benefits with no age and/or service limitations;
>
> Employees continue to accrue benefits but with age and/or service limitations;
>
> Benefits are actuarially increased based on date of commencemnt of retirement;
>
> Other

It was found that a majority of older workers (57 percent) could increase their pension benefit by postponing pension acceptance beyond the normal retirement age, largely through continued accruals. (Table 19) This finding is contrary to the commonly held belief that continued accrual is relatively uncommon. Most participants in all types of plans could continue accruals, at least up to some age/service limit, and most participants in plans other than the defined benefit type could continue pension acrruals indefinitely (or until mandatory retirement rules were enforced).

The postponed retirement findings raise questions, such as why employers bother to offer continued accruals when employees are, in general, retiring so early. Perhaps employers are anticipating federal policy changes in this area, or perhaps continued accrual is a way to appear non-discriminatory. It is inexpensive because few people take advantage of it and depending on how the benefit is computed, increases may be very modest.

Employers' Beliefs About Mandatory Retirement Rules

Since many employees subject to mandatory retirement are currently offered substantial inducements to retire early, and most of their co-workers seem to be responding to the encouragement by retiring at relatively young ages, one becomes curious about why employers believe they need mandatory retirement rules.

The responses cross-tabulated by size of the firm, show that the vast majority (78 percent) of workers subject to mandatory retirement worked for firms which believed the policy was important for providing advancement opportunities. The larger the firm, the more convinced the personnel officers were that mandatory retirement was important in this regard. The employers of 40 percent of those working for the largest firms felt the policy was very important in providing advancement opportunities.

Our data also demonstrate that older workers' employers believe that mandatory retirement is significantly less important as a way to remove unproductive older workers, than as a way of providing advancement opportunities for younger workers. Nevertheless, the employers of 52 percent of surveyed workers subject to mandatory retirement felt the age limit was important for this purpose, while 48 percent felt it was unimportant.

PART I

Table 19. Percent of Older Workers With Provisions for Postponed Retirement by Pension Plan Type

Provision for Postponed Retirement in Employee's Plan	Type of Pension Plan: Defined Benefit	Defined Contribution	Other	All Older Workers
No Provision	14.6	28.2	13.4	15.6
Same Benefit as Though Retirement Occurred at Age 65 or Normal Retirement Age	28.6	14.1	0.0	26.6
Accrual Continues With No Age/Service Limits	27.3	50.0	85.4	30.9
Accrual Continues but With Age/Service Limits	23.7	3.4	0.0	21.4
Benefits Actuarially Increased	4.9	4.4	1.2	4.7
Other	0.9	0.0	0.0	0.8
Total	100% (2333)	100% (206)	100% (82)	100% (2621)

Tables 20 and 21 were constructed to explore the relationship between performance evaluations and mandatory retirement. If performance evaluations substitute for mandatory retirement, then employees not subject to an age limit would be expected to be more likely to have their performance evaluated. For employees in our sample, this is not the case. Instead, mandatory retirement and performance evaluations tend to occur together, as dual elements of employer policy.

Perhaps employees working for firms with mandatory retirement had been subject to less strict evaluations which terminated only the worst workers, with the employer relying on mandatory retirement to terminate the moderately unproductive. If so, then employees in firms with mandatory retirement could expect performance evaluations to become stricter since, for most, the mandatory retirement age was recently raised. The results from Table 21 do not confirm this hypothesis, since employees subject to both performance evaluations and mandatory retirement are no more likely than those subject to performance evaluations alone to have their work scrutinized more closely in the future.

Although inconclusive, these results tend to question the substitutability of mandatory retirement and performance evaluations. Instead, both formal performance evaluations and mandatory retirement may be the product of the same antecedents. For example, mature, rather large, hierarchially structured organizations which prefer to promote from within and to retain employees for long periods must not only develop equitable ways of determining who should be promoted, but also assure that advancement opportunities will be available when people are ready.

The relatively slow-growing nature of these mature organizations, coupled with low employee turnover, means that openings must be provided largely through retirements. Thus, controlling retirement behavior is of utmost importance to the maintenance of the entire structure.

Anticipated Changes in Employee Retirement Behavior

To the extent that employers wish to influence employee retirement behavior, rational response to the ADEA Amendments will be predicated on their belief that employees will change their behavior as a result of the Amendments. Findings from the analysis of employee data already presented show that the Amendments have had a very limited effect on employees' retirement plans.

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Table 20. Percent of Older Workers Subject to Formal Performance Evaluation by Mandatory Retirement Policy of Their Employer

Employee Subject to Formal Performance Evaluation	Employer's Mandatory Retirement Policy	
	No MRA	Has MRA
No	33.4	12.4
Yes	66.6	87.6
Total	100% (1376)	100% (1687)
Percent Non-response	3.3	0.9

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Table 21. Percent of Older Workers Whose Employers Anticipate More Strict Performance Evaluations by Mandatory Retirement Policy

Employer is Anticipating More Strict Performance Evaluations	Employer's Mandatory Retirement Policy	
	Has MRA	No MRA
Yes	38.9	37.8
No	60.8	62.0
Don't Know	0.3	0.2
	100% (1306)	100% (989)
Percent Non-response	11.6	2.0

The results presented in Table 22 show that the majority (64 percent) of employees' personnel officers anticipate no change in retirement behavior in the next few years. But when change was expected, more than twice as many employees were expected to work longer as were expected to retire earlier.

When anticipated changes in retirement age were cross-tabulated against the recent average retirement age, it was found that the employees whose co-workers retired earliest (before age 61) and latest (after age 65) were the least likely to be expected to change their recent retirement behavior. Employees whose co-workers retire at age 61 or 62, on average, were most likely to have their personnel officers expect them to begin working longer, followed by employees whose co-workers now retire at age 65. Those with co-workers retiring at age 65 were also seen as the most likely group to decrease their retirement age, on average.

The net effect of all factors influencing retirement behavior, as seen by personnel officers, is an increase in the average retirement age. However, half of those expected to delay retirement are offset by workers expected to begin retiring earlier. And most expected to delay retirement currently retire well before reaching age 65. Therefore, relatively few employees are expected to continue working long enough, on average, to be affected directly by the Amendments's higher age limit.

Past experience and expectation of change in retirement behavior are likely to be the relevant variables in the firms' policymaking process, if that policy is rationally constructed to influence employee retirement behavior. Given the relatively early retirements in the recent past, and the general expectation that little will change, employers, in general, have little reason to quickly alter their benefit structure in response to the Amendments. However, some firms may have already done so, and their expectations of future employee behavior may be made in light of recent changes in incentives. The next section addresses recent changes in employer policy and those anticipated in the near future.

3. Recent and Anticipated Policy Changes

Since the survey was to be fielded soon after the 1978 ADEA Amendments became effective, the instruments were designed primarily to capture future changes in employer and plan sponsor policy. Firms were not expected to alter policies, other than

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Table 22. Changes in Employees' Retirement Behavior Anticipated by Their Personnel Officers

Personnel Officer's Anticipated Change in Average Retirement Age	Number of Older Workers	As a Percent of Workers Whose Personnel Officer Responded	As a Percent of Workers With a Co-worker Retiring Last Year
Increase	454	15.2	23.6
Decrease	211	7.1	11.0
Stay the Same	1228	41.1	63.9
Don't Know	28	0.9	1.5
No Retirees in the Employee's Occupation Last Year	1065	35.7	—
No Response	139	—	—
Total	3125	100% (2986)	100% (1921)

their mandatory retirement age limit, very quickly. The data was actually collected approximately one year after the effective date of the Amendments, and, more importantly, two years after the Amendments were passed, and nearly three years after two essentially similar versions were passed by the House and Senate. By 1977 it was clear to observers of Congress that some ADEA Amendment would be enacted, though the specific details were yet to be agreed upon. The firms which followed the actions of Congress had approximately three years to evaluate the anticipated impact of the impending legislation, and alter policies accordingly, before the survey date were collected.

Policy Changes Before the Survey

Our data indicate that the overwhelming majority of all older workers (91 percent) had experienced no change in encouragement to retire between January 1979 and the time of the survey. Only 8 percent were subject to some change in employer policies. Although the numbers were small, employees subject to mandatory retirement were more likely (10 percent) to have experienced some change in early retirement policy than employees not subject ot an age limit (6.7 percent). The data show that nearly all accomplished changes were in the direction of increased encouragement to retire before the normal retirement age.

Potential Changes in Employer Retirement Policy Due to ADEA

Subsequent to being asked what changes in policy toward encouraging retirement had already occurred since January 1979, personnel officers were asked for their recommendations concerning future changes in inducements due to the Amendments.

The responses tabulated in Table 23 show that the great majority of personnel officers would recommend no change in inducements over the near term. However, if and when recommended changes are made, employees can overwhelmingly expect to be offered more liberal inducements in the future. Employees subject to an age limit are substantially more likely to be offered liberalized inducements than those who may work as long as they are able. When accomplished policy changes encouraging early retirement were tabulated against recommendations for liberalized inducements, the results in Table 24 show that an additional 7.6 percent of employees with no recent change in encouragement to retire early may be offered liberalized inducements in the future. In addition, half of those recently more strongly encouraged to retire could have those inducements

Table 23. **Personnel Officers' Recommended Changes in Inducements to Early Retirement Because of ADEA, by Mandatory Retirement Policy**

Change	Employers Mandatory Retirement Policy Has MRA	 No MRA	 All Workers
None	86.0	90.5	88.0
More Liberal	13.2	18.3	11.1
Less Liberal	0.8	1.1	0.9
Total	100% (1671)	100% 1333)	100% (3004)
Percent Nonresponse	1.8	6.3	3.9

Table 24. **Percent of Older Workers Whose Employers Made Policy Changes Directed Toward Encouraging Retirement Prior to the Survey, by Recommendations That Inducements to Early Retirement Be Liberalized in the Future**

Accomplished Changes in Policies Toward Encouraging Early Retirement	Recommended Future Changes in Inducements to Early Retirement: More Liberal	Less Liberal	No Change	Total
All Older Workers:				
More Encouragement than before January 1979	52.7 (3.7)[1]	0.5 (*)	46.8 (3.3)	100% (201)
Less Encouragement than Before January 1979	8.2 (0.1)	8.2 (0.1)	83.7 (1.4)	100% (49)
No Change in Policy Since January, 1979	7.6 (6.9)	0.8 (0.7)	91.7 (83.7)	100% (2632)
Older Workers Subject to Mandatory Retirement:				
More Encouragement than before January 1979	50.4 (4.3)	0.7 (0.1)	48.9 (4.2)	100% (139)
Less Encouragement than Before January 1979	4.0 (0.1)	12.0 (1.3)	84.0 (0.2)	100% (25)
No Change in Policy Since January 1979	9.0 (8.1)	0.6 (0.5)	90.4 (81.3)	100% (1452)
Older Workers Not Subject to Mandatory Retirement				
More Encouragement than before January 1979	33.6 (2.8)	0.0 (0.0)	41.9 (2.1)	100% (62)
Less Encouragement than before January 1979	12.5 (0.2)	4.2 (0.1)	83.3 (1.6)	100% (24)
No Change in Policy Since January 1979	5.8 (5.4)	1.0 (0.9)	93.2 (86.9)	100% (1180)

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[1] Numbers in parenthesis are percentages of the total sample, or subsample. An asterisk denotes less than half a percent.

liberalized still further. Using these data, approximately fourteen percent of all older workers either have already received (7.0 percent) or may receive in the future (6.9 percent) more encouragement to retire early. Only 2.4 percent have received (1.7 percent), or may (0.7) receive less encouragement to retire early.

The proportion among workers subject to an age limit is even higher. Nearly seventeen percent have either already been more strongly encouraged to retire early (8.6 percent), or may be so in the future (8.1 percent). Only 2 percent of workers subject to mandatory retirement either have already received less encouragement to retire early or may be offered less liberal inducements in the future. These results suggest that an upper bound on the number of affected employees subject to age limit lies somewhere between 15 and 20 percent.

Similar calculations for employees not subject to an age limit suggest an upper bound of 10 percent already are (4.9 percent), or will be (5.4 percent), more strongly encouraged to retire early. Only 3 percent of this group has received less encouragement, or may be offered less liberal inducements, to retire early.

A particularly striking finding is that, contrary to expectations, half of the potential policy changes were already accomplished by the time of the survey. This important point should be kept in mind when potential changes are addressed later in this section.

There was some evidence presented above, concerning policy changes already made by the time of the survey, which is consistent with the hypothesis that employers are attempting to counter anticipated increases in employee retirement age by increasing incentives, both financial and nonfinancial, to encourage early retirement. To explore this hypothesis further, personnel officers' recommendations for changing inducements to early retirement were cross-tabulated against their beliefs that average retirement ages will change in the near future.

The results ran counter to expectations, for not only were more liberal inducements recommended for 20 percent of the employees expected to increase their retirement age, but for an equivalent proportion (19.6 percent) of employees expected to retire earlier than in the recent past.

While there is a ready explanation for wanting to offer liberalized inducements to counter a perceived shift to later retirements, the question arises as to why personnel officers

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Table 25. Percent of Older Workers Whose Plan Sponsors Recommended Changes in Individual Retirement Benefits Due to ADEA

	Plan Sponsor's Recommendation for Change				
Retirement Benefit	Increase	Decrease	No Change/Not Provided[1]	No Response[2]	Total
Normal Retirement	7.2	0.7	81.0	11.1	100%
Early Retirement	4.7	1.5	81.9	11.9	100%
Amount of Cost of Living Adjustments	11.3	1.0	74.5	13.2	100%
Disability Retirement	6.5	2.3	78.8	12.4	100%
Death	4.4	0.3	82.6	12.7	100%
Supplemental	1.7	*	82.3	16.0	100%
Other	2.9	0.6	83.8	12.7	100%
n					(2696)

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*Less than .05 percent.

[1] Although "no change" and "not provided" were separate responses on the questionnaire, several cross-tabulations showed that many plans not providing the benefit were coded "no change" and the categories were collapsed.

[2] It is known that 99 of these observations have no pension plan, and the cross-tabulations mentioned above showed that for COLAS and supplemental benefits most non-respondents either provided no such benefit or did not respond to the benefit question.

expecting younger retirement ages would wish to encourage the trend still further through liberalized inducements?

The most obvious possible explanation is that although retirement age is perceived to be declining, it is not declining fast enough, or to an age young enough to satisfy the employer or the age may be expected to decline because inducements will be liberalized.

Another plausible interpretation is that employers develop ad hoc policies on a piecemeal basis, responding to each change in conditions separately without ever formulating an overall retirement policy strategy or objective. Labor disputes are settled, federal law and regulations are satisfied, and/or benefits are adjusted to keep the firm competitive, but no one pays attention to the cumulative impact on retirement behavior. Attention to retirement behavior in this scenario is, instead, likely to focus only on controlling costs. Recognition of ADEA may draw a reflexive response to liberalize benefits, even though there is already a downward trend in age at retirement.

The Possible Impact of ADEA on Specific Employee Benefits in the Future

Given that relatively few older workers were expected to postpone retirement, with still fewer expected to continue working past age 65, and that some adjustments to retirement policies had already been made, one would expect there to be relatively few adjustments to benefits packages as a result of ADEA. In general the results confirm this expectation.

The employee's pension plan sponsor was asked what changes in pension or retirement plans were anticipated because of ADEA. As seen in Table 25, few employees can expect to have their retirement benefits changed due to ADEA, even if plan sponsors' recommendations are implemented. The table does show clearly that when changes were recommended, plan sponsors were much more likely to recommend the organization consider increases than decreases in benefits. Increasing cost-of-living adjustments was most frequently suggested, followed by increasing normal and disability retirement benefits. Increasing suppplemental, death, and early retirement benefits were less likely to be listed. Although decreases were seldom recommended, disability and early retirement benefits were the most often considered for this adjustment.

Pension plan sponsors, unlike personnel officers, were specifically asked whether changes currently under consideration were the result of ADEA. Table 26 shows that, although nearly 30 percent of all older workers may have their retirement benefits changed, only 8 percent have plan sponsors considering changes in retirement benefits as a result of ADEA. Even among employees likely to have benefits changed, fewer than 30 percent of the changes are even partly the result of ADEA. The great majority (72 percent) of changes would have been made in any event according to plan sponsors.

When recommended changes were tabulated against the reason changes were currently being considered, in general, fewer than half the recommendations were even under active consideration. Less than 30 percent of sponsors' recommendations were being considered even partly as a consequence of ADEA.

The case of cost-of-living adjustments is particularly dramatic. Although 11 percent of employees would receive higher cost-of-living adjustments if their plan sponsors' recommendations were implemented, fewer than 4 percent actually have the matter under consideration, and fewer than 1 percent may receive them even partly as a consequence of ADEA. When one remembers that these changes were not even necessarily planned, but only under consideration, the impact of ADEA is likely to be quite small in the immediate future.

To the extent that sponsor recommendations can be taken as a barometer of thinking about the future, tabulations of these recommendations by industry, firm size, and unionization reveal a weak possibility that employees who either work for smaller firms (less than 1,000 employees), provide services, or are non-unionized may be more likely to have the plan provisions for normal retirement benefits, cost-of-living adjustments or disability benefits improved than other workers.

Although personnel officers were not asked whether they might change specific pension benefits, both personnel officers and plan sponsors were asked what changes in health and welfare benefits were under consideration as a result of ADEA. The findings clearly show that the great majority of older workers' employers and plan sponsors agreed that no changes in health and welfare benefits were under consideration.

When the multiple personnel and sponsor responses to the question were merged, the tendency to consider mostly liberalization of benefits emerges more sharply. Nearly 70 percent of the changes under consideration by personnel officers and 63 percent considered by plan sponsors are in the direction of raising benefit levels, adding types of coverage and/or shifting costs more to the company.

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Table 26. **Percent of Older Workers Whose Plan Sponsors Recommended Changes in Pension/Retirement Benefits by the Reason for Planned Changes**

Benefit that Worker's Sponsor Recommended for Change	Reason for Anticipated Changes: At Least Partly Due to ADEA	Change Would Have Been Made Anyway	Plan No Change or No NRA	No Response	Total
Normal Retirement	15.0	36.0	48.1	0.9	100% (214)
Early Retirement	16.8	30.5	52.1	0.6	100% (167)
Cost-of-Living Adjustments	0.8	21.4	70.8	0.0	100% (332)
Supplemental	29.8	17.0	53.2	0.0	100% (47)
Death	11.8	21.3	66.1	0.8	100% (127)
Disability Retirement	18.5	10.9	69.7	0.8	100% (238)
Other	29.5	22.1	48.6	0.0	100% (95)

Very few employees have personnel officers considering cutting back benefits, and still fewer have plan sponsors thinking of doing so. When workers might have health/welfare benefits altered, they are more than twice as likely to receive increased benefit levels, additional types of coverage or a shifting of costs more to the company, as a reduction in benefit levels, elimination of types of coverage, or a shifting of costs more to themselves.

4. What Employers Might Do Should Many Older Workers Postpone Retirement to Age 70

In the previous sections it was noted that most of the older workers surveyed have seen co-workers recently retiring, on average, before age 65, some substantially earlier. Few of their employers, while anticipating some net increase in retirement age in the near term, appear to expect average retirement ages to exceed 65. Contrary to recent experience and employer expectations, substantial numbers of older workers would have to postpone retirement for large numbers of average retirement ages to reach 65, much less exceed it. Consequently it might be difficult for employers to imagine most older employees working until age 65, and sheer conjecture to imagine most working until age 70. Thus, results from this section are more likely to reveal the direction of current thinking, than form an accurate picture of the future.

Perceived Impact on the Firm Should Many Older Workers Postpone Retirement

From Table 27 it is clear that most of the employees' personnel officers believed there would be some impact on the cost of labor (60 percent), or the number of vacant positions (51 percent), should a large number of older workers postpone retirement to age 70. While most of the personnel officers believed impact on the cost of labor was in the direction of increased costs should retirements be delayed (50 percent), a substantial minority believed costs would decrease (11 percent).

While the arguments for the increased cost of older labor are well known--higher costs for life, disability, and health insurance, and declining productivity--the arguments for decreasing costs are less obvious. Workers over age 65 can cost employers substantially less if pension accruals are not continued, and accrued benefits are not adjusted actuarially or are adjusted by an amount that is less than actuarially fair.

Table 27. Percent of Older Workers Whose Personnel Officers Anticipate Effects on the Cost of Labor and the Number of Vacancies Should Large Numbers of Workers Postpone Retirement From Age 65 to Age 70

Type of Effect Anticipated	Cost of Labor	Number of Vacancies
No Effect	35.0	44.4
Would Increase	49.7	NA
Would Decrease	10.6	51.4
No Response/Don't Know	5.3	4.2
	100% (3125)	100% (3125)

Pensions represent a significant proportion of the total cost of labor. Further cost reductions can be realized by converting health insurance into a supplement to medicare, or by discontinuing such coverage altogether. Disability insurance could also be discontinued when an employee reaches age 65.

The Amendments specifically permit employers to offer different levels or types of benefits to older workers in order to control costs. Such differentials were not deemed to be in violation of the Amendments, ERISA or other existing federal regulations.In addition, older workers are more reliable employees. That is, more likely to be punctual, and have lower absenteeism rates.

When employer beliefs concerning the impact of *large numbers of* workers postponing retirement are compared across firm size, industrial sector and mandatory retirement policies, some interesting differences appear.

As seen in Table 28, the personnel officers of employees subject to an age limit are significantly more likely to anticipate an effect on the cost of labor (69 percent) than those of employees subject to no age limit (54 percent). While the proportion expecting costs to increase is similar among the two groups, (54 percent and 50 percent, respectively), employees subject to mandatory retirement rules were more than three times as likely to work for employers expecting costs to decrease (16 percent) as employees not subject to such rules (4 percent).

The employers of a surprising 21 percent of manufacturing workers subject to an age limit believe labor costs would decline should large numbers of older workers postpone retirement. One can only speculate at to this finding. Perhaps these employees are less likely to be able to continue pension accruals, or have their accrued benefit increased should they continue working beyond age 65. Alternatively, the supposed lower absenteeism of older workers may be the explanation, since in some manufacturing industries absenteeism is reported to be alarmingly high.

When responses are compared across size groups, a distinct trend emerges. The larger the size of the firm, the more likely employees are to have personnel officers believe there will be an impact on the cost of labor. Only 44 percent of employees' personnel officers in the smallest firms believe there will be an impact, but in the largest firms 90 percent of the workers' personnel officers expect an impact. Except for the smallest and largest firms, there is little difference in the proportion expecting costs to increase, but there is a difference in the proportion expecting costs to decrease. In general, the larger the firm the employee works for, the more likely his/her personnel officer is to anticipate a decline in the cost of labor should a significant number of workers postpone retirement.

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Table 28. Percent of Older Workers Whose Personnel Officers Anticipate Effects on the Cost of Labor Should Large Numbers of Workers Postpone Retirement to Age 70 by Their Employer's Mandatory Retirement Policy, Industrial Sector and Size

Employer's Mandatory Retirement Policy, Industry and Size	Anticipated Effect Should Large Numbers of Workers Postpone Retirement				
	The Cost of Labor Will Increase	The Cost of Labor will Decrease	The Cost of Labor will Remain the Same	No Response	Total
Mandatory Retirement Policy and Industry					
Employer has a MRA:					
Manufacturing	47.3	21.3	31.2	0.2	100%
Services	56.7	14.4	28.3	0.6	100%
Other	64.2	2.1	33.7	0.0	100%
Subtotal	54.2	15.7	29.7	0.4	100% (1669)
Employer has no MRA:					
Manufacturing	47.9	7.7	44.1	0.3	100%
Services	51.2	3.3	45.4	0.1	100%
Other	49.2	0.8	50.0	0.0	100%
Subtotal	49.9	4.3	45.6	0.1	100% (1338)
Number of Workers Employed					
Fewer than 200	40.7	3.8	55.6	0.0	100% (613)
200 - 999	56.8	2.1	41.0	0.2	100% (576)
1,000 - 4,999	60.1	3.9	35.8	0.2	100% (536)
5,000 - 29,999	59.5	6.9	32.6	1.0	100% (595)
30,000 - 99,999	60.6	11.1	28.1	0.3	100% (366)
100,000 and over	28.8	61.6	9.6	0.0	100% (310)

If reducing or controlling the cost of labor is a major reason for mandatory retirement rules, then one would expect employers with age limits to be more likely to expect increases than employers without such rules. However, this was not the case. In fact, employers with age limits were more likely to expect a decrease than those without such limits. These findings are consistent with the earlier finding that mandatory retirement rules were less important as a way to remove unproductive older workers than as a way to assure promotional opportunities.

The findings suggest that, at least for some employers, assuring the retirement of older workers is of sufficient importance that they are willing to pay for it in higher labor costs. This is true because a believed decline in costs associated with delayed retirements, means that employers are currently incurring higher costs through encouraging earlier retirement. As suggested earlier, assuring promotional opportunities may be the overriding concern of these employers.

When anticipated effects on the number of vacancies are compared across industrial sector, mandatory retirement policy and firm size, the results show clearly that employers of workers subject to an age limit are more likely to believe there will be an impact on the number of vacancies should large numbers of older workers postpone retirement to age 70. Among this group, it is in the manufacturing industries that the proportion is the highest (78 percent). Manufacturing employees subject to an age limit were also the most likely to have employers believe a decline in the cost of labor would occur. It is in this segment of the economy that employers may be most willing to pay for promotional opportunities through labor costs.

Employees of service firms subject to an age limit were very likely to have employers believe there would be an adverse effect on the number of vacancies (73 percent), however, this group was also the most likely to have employers expect the cost of labor to increase (51 percent).

When responses are compared across firm size categories, a very strong trend emerges. The larger the employer, the more likely the number of vacancies is expected to be affected should many older workers postpone retirement. The personnel officers of 83 percent of employees of the two largest size categories expected an impact, a proportion similar in magnitude to those anticipating some effect on the cost of labor. Clearly, it is among the largest firms, and the manufacturing and service firms with an age limit that most of the impact is anticipated should many older workers postpone retirement.

Given these anticipated negative effects, the question of what might employers and plan sponsors do, is addressed in the nest subsection.

Anticipated Changes in Benefits Should Many Older Workers Postpone Retirement

Few employees can expect to be met with any change in policy should they postpone retirement; however, when, or if, changes are made, employees can expect their delaying retirement to be met most often by an increase in early retirement benefits (17 percent), followed by more liberal gradual retirement (10 percent) and better post-retirement health/wealth benefits (9 percent). Relatively few older workers were employed by firms that might discontinue pension contributions for workers over age 65 (8 percent), or give youth priority in hiring (4 percent).

When multiple responses were merged it appears that the majority of older workers (65.2 percent) can expect their employers to make no policy changes at all should they delay retirement in significant numbers. Most of the thirty percent who may elicit a policy response from their employer will be offered more liberal inducements to retire--if recommendaions are implemented--a pattern consistent with earlier findings. It is clear that most older workers work for employers who would prefer to use positive inducements to influence employee retirement behavior rather then reduce the marginal gain from continued work.

Some notion of whether the recommendations were based on experience, anticipation of trends, or were simply dreamed up may be provided by Table 29. Employees with co-workers expected to begin working longer were nearly twice as likely to elicit recommended changes from their employers as those whose retirement behavior is expected to remain the same. Employees whose co-workers are expected to retire earlier are nearly as likely to elicit some recommendation for change, but the number of multiple recommendations is smaller for this group. Employees expected to continue working longer are significantly more likely to be met with every response, expect discontinuation of pension contributions, than employees expected to begin retiring earlier.

A small, but significant minority of older workers (7.6 percent) worked for firms which might respond to their working longer by discontinuing pension contributions for workers over age 65, sometimes in concert with increases in other benefits.

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Table 29. Percent of Older Workers Whose Personnel Officers Recommend Policy Changes Should a Large Number of Workers Postpone Retirement by Anticipated Changes in the Average Retirement Age

	Anticipated Changes in the Average Retirement Age			
Recommendation	Increase	Decrease	Remain the Same	No Retiree's in the Worker's Occupation Last Year
Recommended Some Change in Policy	48.2	41.4	29.3	25.2
Individual Changes:				
Increase Early Retirement Benefits	31.1	23.6	15.6	11.4
Discontinue Pension Contributions at At Age 65	12.4	10.8	5.0	6.7
Increase Post-Retirement Health and Welfare Benefits	19.2	8.9	7.8	6.3
Liberalize Gradual Retirement	18.2	11.3	10.0	8.0
Hire as Young a Workforce as Possible	6.1	3.4	3.4	3.3
n	(411)	(203)	(1195)	(1028)

5. Summary of Findings and Conclusion

On the assumption that most of the effects of the 1978 ADEA Amendments will be felt through employer policies, rather than on employees directly, this section reviewed employer response to the ADEA Amendments.

Summary of Major Findings

In terms of the number of older workers affected, the greatest impact was on employers' mandatory retirement rules. Forty-four percent of the employees were subject to new mandatory retirement policies as a result of the Amendments, and an additional 9 percent had policies changed for other reasons. The great majority (87 percent) of the changes attributed to ADEA involved retaining mandatory retirement with an older age limit. Only 6.4 percent of all older workers had their age limit removed as a result of ADEA. Nearly all employers responded to the legal mandatory retirement age permitted by the Amendments. Most of the employees experiencing no recent change in employer policy (72 percent) had been subject to no age limit since 1976, and nearly all of the remainder had been subject to age limits of 70 or older prior to the Amendments. Although the impact on employer's mandatory retirement policies was found to be quite large, the corresponding impact on other retirement-related benefits and policies was found to be of a much smaller order of magnitude.

Between January 1, 1979 and the time of the survey, (early 1980) nearly 10 percent of the workers' employers had altered their policies toward encouraging retirement before the normal retirement age, and 12 percent had altered policies toward encouraging retirement between the firms'normal and mandatory retirement ages. Nearly all of the pre-survey changes were in the direction of more encouragement to retire early (8.6 percent), or after becoming eligible for normal retirement (10.4 percent). Employees who remained subject to an age limit had more often received greater encouragement to retire before normal retirement age (9 percent) than those who were not subject to mandatory retirement (5 percent).

When recently accomplished changes in policies toward encouraging retirement were tabulated against personnel officers' recommendations that their employers consider changing inducements to early retirement as a result of ADEA, the results show that 17 percent of employees subject to an age limit have been more strongly encouraged to retire early (8.6 percent), or might be offered more liberal inducements in the future (8.1 percent). Only 2 percent of these older workers have recently received less encouragement to retire early, or might by offered less liberal inducements in the future.

Perhaps the most significant of the above findings is that at least half the potential impact of the Amendments on employer policies had already been felt by the time the survey data were collected.

Employers, especially those retaining an age limit, were offering their workers substantial incentives to encourage retirement before the normal retirement age, including full accrued early retirement benefits, continuation of health, life and disability insurance after retirement, and retirement counseling. Employees' co-workers (those working for the firm in the same occupation) had been responding to the inducements by retiring at relatively early ages (55 percent of all employees had co-workers retiring before age 62 and 72 percent by age 64, on average). Co-workers subject to an age limit had been retiring at substantially earlier ages than those not subject to a limit (43 percent by age 61, 63 percent by age 62 and 79 percent by age 64, on average).

Employers were asked whether the average retirement age was expected to change in the next few years. Sixty-four percent expected no change in the average retirement age for the employees' occupation. When change was expected, twice as many were expected to delay retirement as retire earlier, but only 7 percent expected the average retirement age to exceed 65.

Given the policy changes already accomplished, the substantial inducements to early retirement, the relatvely young retirement ages, and the general anticipation that employees would not change their recent retirement behavior, one would expect few additional changes in pension or health and welfare benefits. The findings confirm this expectation and nearly all of the recommendations involved either increasing benefit amounts, adding types of coverge or shifting costs more to the employer.

When plan sponsors' recommendations were compared to the reason why policy changes were being actively considered or planned, ADEA was found to be responsible, even in part, for very few of the likely benefit adjustments in the near future. Most of the recommended changes were not under active consideration, and most of the changes that might actually be made were due to other factors, and would have been implemented in the absence of the Amendments.

Consequently, the impact of ADEA on employee's retirement benefits in the near future is expected to be quite limited. The effect of ADEA is overshadowed by a general trend toward more generous benefits produced by other factors.

When employers and plan sponsors were asked what policy change they might recommend their organization consider should a large number of older workers postpone retirement to age 70, the response was again overwhelmingly in the direction of providing more generous benefits. While it was feared that employers would discontinue pension accruals for workers over age 65 in response to the Amendments, the results did not confirm this expectation. Only 6 percent of workers permitted to continue accruals beyond the normal retirement age had employers who would recommend the alternative be taken under advisement.

Despite the inducements offered to encourage early retirement, the relatively young retirement ages and the anticipation that very few employees would postpone retirement beyond age 65, the employers retaining their age limits believed that mandatory retirement rules were important. However, these employers believed age limits were more important as a way to assure promotional opportunities than as a simple way to remove unproductive older workers. The larger the firm the relatively more important providing opportunities for younger workers became.

Two other findings were consistent with the relative unimportance of age limits in removing unproductive older workers. The first was that employees subject to an age limit were also more likely to be subject to formal performance evaluation, but they were no more likely to have the evaluations become more strict in the near future. These results suggest that age limits did not act primarily as a substitute for formal performance evaluations.

The second set of findings which were consistent with the idea that providing promotional opportunities is more important to employers than removing unproductive older workers, concerned the anticipated impact of a large number of older workers postponing retirement to age 70. The personnel officers of workers subject to an age limit were twice as likely to expect an impact on the number of vacancies, and the larger the firm the more unanimous the response. Employers with and without age limits were equally likely to believe the cost of labor would increase, but employers of those subject to an age limit were four times as likely to believe the cost of labor would decrease. A surprising 21 percent of manufacturing workers subject to mandatory retirement, and 34 percent working for the largest firms (over 30,000 employees) has employers believing labor costs would decrease should many older workers postpone retirement. Since these were also the firms most likely to retain an age limit and offer considerable inducements to early retirement, assuring promotional opportunities would appear to take precedence over controlling labor costs or retiring unpoductive workers for these employers.

Conclusions

The major short-term impact of the 1978 ADEA Amendments was to force employers to raise their mandatory retirement age limits. There has been relatively little change in other retirement related policies, and there will probably be little in the near future due to ADEA. Most changes were being made in response to other factors. Rather than attempting to mitigate the potential effect of the Amendments, most employers appeared to be waiting to see whether, and how, employees' retirement behavior will change before they alter policies.

Higher age limits represent only one variable influencing retirement decisions. Under the "target-income" model of retirement behavior, most employees are predisposed to retire, or more accurately, accept a pension, at relatively young ages. The major factor influencing the timing of retirement is affordability. The decision concerning whether the employee can afford to retire may be based on maximizing lifetime pension wealth, the extent to which the employee can maintain his/her pre-retirement standard of living immediately after retirement, or the adequacy of retirement benefits throughout the period of retirement. Consequently, the level and kinds of retirement benefits offered by the employer, as well as rates of inflation anticipated in the future, influence the retirement decision.

Employers interested in controlling retirements appeared to be willing, to bear the costs of maintaining the pre-Amendment status quo by providing more generous retirement benefits. The marginal cost of doing so may not be that great, since few workers were expected to continue working beyond age 65.

Although the findings of this analysis do not provide conclusive proof, there is enough consistent evidence to support a general picture of the firms most likely to be willing to counter inceasing retirement ages by providing stronger incentives. The firms are likely to be large, mature, hierarchically structured, bureaucratic organizations experiencing relatively slow or no growth. They promote from within and prefer to retain employees for an entire career, either because effective employees must acquire a substantial amount of firm-specific human capital, or because the practice is consistent with the firms' management philosophies.

For an employee to remain long with the firm he/she must be allowed to progress up the corporate ladder. Promotion opportunities in a relatively closed organization are provided largely through the retirement or death of older workers. The retirement of a single highly placed individual can result in many promotional opportunities as the effect trickles downward through the corporate structure.

Assuring that retirements, and thus opportunities, occur predictably is of utmost importance to the successful operation of such a system of personnel management. Even in the absence of other forces, the internal dynamics of the relatively closed hierarchical structure makes assuring retirements more important than minimizing labor costs. These systems also foster a belief among employees that after a long career with the company, older workers should retire to give someone else a chance.

When one introduces the pressures of new technology, -- obsolescence of human capital and reduced demand for labor -- facilitating retirement becomes even more imperative, since the choice may then be between an older worker retiring with partial compensation, and a younger worker's keeping his job. In that event, the socially preferable alternative has been to retire the older worker.

Barring any major change in economic factors or federal retirement policies in the short term, these firms will continue to encourage their employees to retire relatively early. However, the ADEA Amendments and other contemplated changes in federal retirement policy are directed toward solving problems resulting form a situation that will not be acute for some 30 years--the shift in the age structure of the United States' population. If the social security retirement age is raised to 68, or other incentives provided to encourage later retirement are enacted, substantial upward shifts in retirement ages are likely to result.

If retirement ages increase precipitously, tremendous pressure would be generated in the relatively closed personnel management structure described above. Employers might be faced with the choice of making major structural changes in their system of personnel management, or spending large sums of money to pay retiring workers supplemental benefits until they are old enough to qualify for social security benefits.

If retirement ages increase more slowly, the outcome is more likely to be determined by other factors such as the rate of growth in the economy, and the unemployment rate. The total long-term impact of the Amendments on employee behavior and employer policies will likely be determined largely by changes in other federal retirement policies and future economic performance.

PART II.

EFFECTS OF MANDATORY RETIREMENT ON YOUNGER WORKERS

Summary

From a macroeconomic perspective, the likely change in older workers' labor supply is not of great consequence for the economy or the workforce as a whole. Thus, the fear of some that the mandatory retirement age of 70 will seriously affect job opportunities for younger workers is generally unfounded. However, it is possible that particularly vulnerable groups of workers in particular industries could experience fewer jobs or promotional opportunities.

An analysis of census survey data was undertaken to assess the maximum immediate impact on younger workers resulting from any direct competition for jobs held by age-64 workers who might elect to remain in the labor force past 65 due to the increase in the mandatory retirement age. The possible job competition was assessed for youth, women and black workers who hold full-time, full-year jobs at wage levels comparable to the older workers. The logic behind the analysis was that any short-term effect on these groups will result from a substantial number of older workers who hold jobs comparable to these other workers continuing to work longer than they would have in the absence of the change in mandatory retirement age.

The immediate effect of the 1978 Amendments on younger, female, and minority workers based on estimates of the direct effect on older workers was found to be small. The estimated additional number of comparable age-65 workers are potential competition for less than one quarter of one-percent of all full-time workers ages 16-24; less than one half of one percent of all full-time black workers ages 16-59; and around one tenth of one percent of all full-time females workers ages 16-59.

In all three comparisons (younger workers, black workers, and women workers) with older workers, the wage-comparable younger workers were concentrated in manufacturing, professional services, and wholesale and retail trade, while the wage-comparable older workers expected to work past age 65 were concentrated in manufacturing, professional services, and public adminstration. When these wage-comparable workers were compared, the potential for significant job slot competition within specific industries did not materialize. The general pattern was that apparent high levels of potential competition within certain industries tended to result, on closer scrutiny, from potential competition between workers in only a few particular occupations. The greatest potential for job slot competition was not in occupations with the greatest number of wage-comparable younger workers but in the occupations with the highest ratio of wage-comparable older to younger workers, such as: craft workers for all younger workers; managers, craft workers and laborers for younger black workers; and transportation operatives, laborers and craft workers for younger female workers. However, the magnitude of the competition is still very small, representing no more than four percent of the pool of comparable younger workers in any occupation.

The focus of this analysis was full-time workers; however, some insight can be given to the impact of the change in mandatory retirement age on part-time workers. Although the data show relatively large numbers of younger and older workers in part-time employement, no additional competition is anticipated to result from the change in mandatory retirement age since most part-time jobs were not subject to mandatory retirement rules. Indeed, to the extent that workers who stay in full-time work past age 65 would have taken part-time jobs at that age, competition for part-time work would be lessened by the new mandatory retirement age.

As a result of this analysis, it would seem that such labor market concerns as youth unemployment and affirmative action are not likely to be worsened by the change in mandatory retirement age. Few older workers are projected to continue to work past age 65, and those that are likely to continue to work represent potential competition for a very small number of younger, female and black workers.

POTENTIAL EFFECTS OF MANDATORY RETIREMENT ON YOUNGER WORKERS

1. Introduction

The primary target group for the 1978 ADEA Amendments raising the mandatory retirement age from 65 to 70 consists of those workers approaching 65 who were in jobs with a mandatory retirement age. To the extent that workers who would have retired at the madnatory retirement age continue to work, the change in mandatory retirement age had a direct effect on their labor force participation.

In an economy with a limited number of jobs at a given point in time, a job held by one worker is not available to another workers. Thus, to the extent that older workers remain in jobs as the result of the change in mandatory retirement age, there will be an indirect effect on the employment and promotional prospects of other workers who would have replaced them.

If the older worker is part of a job hierarchy, his/her choosing to continue in the job may affect the promotion of workers in subordinate job positions.

On the other hand, if the older worker is in a nonhierarchial secondary job where a variety of other workers possessing comparable human capital may substitute for him/her directly, his/her choosing to continue in the job may affect job-slot availability for other workers.

The magnitude of such effects on younger workers depends on: (1) the size of the impact on older workers (i.e., the number of older workers who do not retire as a result of the change in mandatory retirement age); (2) the kinds of jobs older workers have; and (3) the characteristics of older workers likely to continue to work as the result of the change in mandatory retirement age. Since we know that workers with different characteristics are not equally likely to retire, we anticipate the indirect effect on younger workers to be selective as well. Thus, even though in the aggregate the number of older workers who choose to continue to work may be small, the differential nature of the effect could be significant for some sectors of the labor force.

There are groups of younger workers whose unique labor force characteristics make them a locus of special concern when considering the indirect effect of the change in mandatory retirement age on new entrants, re-entrants, and late entrants into the labor force and on promotional prospects for those already in the labor force. Minority, women and young workers fare poorly compared with white middle-age males on all measure of labor force status. Consequently, there is sensitivity to any policy which might contribute to further deterioration of the economic position of these vulnerable groups.

Currently, young workers, particularly minority young workers, are of special interest because of their high unemployment rate. Thus, to the extent that older workers who choose not to retire hold jobs that young workers could hold, there is concern that the youth unemployment rate may be exacerbated by the change in mandatory retirement age.

The effect on women and minorities is of interest since it has been argued that continued labor force participation of older workers may prevent new hires and frustrate affirmative action and the goals of equal employment for women and minorities. One argument in favor of mandatory retirement suggests that women and minorities will be the ones that have to wait for jobs if older workers continue to fill job slots (Givens, 1978). Since women and minorities are also represented in the older worker population, members of these groups may, of course, both benefit directly and suffer indirectly as a consequence of the change in mandatory retirement age. Thus, older women and minority workers may elect to work longer and thereby contribute to a reduction in job slots for younger women and minority workers.

Among the arguments advanced in support of mandatory retirement is that it establishes an age at which most workers are expected to leave their jobs, thereby creating openings for younger, less senior workers. If the job held by an older worker is part of a job hierarchy, a series of job openings will be created when the job is vacated, with each worker moving up a level and a young worker hired to fill a position at the lowest level. Thus, it is argued, if older workers delay retirement there are two potential negative consequences for other workers: promotions are retarded, and younger workers are not hired.

If the job is not part of a hierarchy and has the characteristics attributed to jobs in the secondary labor market, a younger worker can substitute directly for an older worker who retires. Thus, when an older worker chooses to continue working in a secondary job, younger workers qualified for the job may be affected directly.

However, since most secondary jobs are not subject to mandatory retirement, the change in mandatory retirement age should not adversely affect most secondary job openings. In the past, older workers forced to retire from primary jobs have often taken secondary jobs where they directly competed with minorities, women and youth. Thus, to the extent that older workers stay in primary jobs as a result of the change in mandatory retirement age, their direct competition for jobs with younger workers in the secondary labor market may be reduced.

The possibility of fewer promotions and job openings for younger workers are not the only concerns of those who oppose raising the mandatory retirement age. Another involves employers' ability to meet affirmative action goals. Firms are required by law to hire qualified minorities and women in order to increase their representation in the labor force. If older workers remain on the job and positions do not become vacant, all hiring including hiring of minorities and women will be retarded.

Although the expressed concerns for younger workers, women and minorities raise important issues of social policy, they are widely regarded by economists as being based on several questionable assumptions:

- That the number of jobs in the economy is fixed;
- That a position which becomes vacant is always filled;
- That women and minorities can successfully compete for most of the jobs that become vacant when an older worker retires;
- That a significant number of older workers will continue to work in response to the change in mandatory retirement age.

In the short run, whether or not younger workers , women and minorities are affected by the change in the mandatory retirement age depends on the extent to which they compete for the same jobs and on the number of older workers who actually remain on the job.

Mandatory retirement rules establish upper boundaries only on the age at which individuals in covered jobs must retire. Individuals in non-covered jobs may work as long as it is mutually beneficial to them and their employers.

2. Previous Studies of the Impact of Older Workers' Labor Supply on Younger, Female and Minority Workers

A. Attitudinal Studies

Effect on hiring. Copperman, Montgomery and Keast (1979) studied the impact of the ADEA Amendments on youth, women and minorities with the following working hypothesis:

> The legislation will not have a significant adverse impact on the job opportunities of youth, women and minorities. While mandatory retirement may constitute one source of job openings, the effects of economic growth, diversification, technological changes, and normal job turnover (including voluntary retirement) will overwhelm the contributions to overall job availability in the economy. Structural labor market problems, however, may occur in certain areas such as declining industries with aging workforces.

Copperman et. al. expected any impact on young, minority and female workers to differ according to characteristics of the firm and its labor force. Industrial classification, geographical location, and size of the firm, along with the age structure and occupational distribution of employees were predicted to influence employers' assessment of the potential impact of the change in mandatory retirement age. In testing the relationship between firms' characteristics and anticipated impact of the Amendments, Copperman et. al found that regardless of business type, employers did not anticipate that the Amendments would affect job opportunities for youth, minorities or women. Employers in manufacturing, retail trade and service industries were the most adamant in their belief that the Amendments would not affect these groups. Size of firm was found to be related to employers' perceptions of the impact of the Amendments. The larger the firm, the more likely employers were to view the amendments as a source of reduced opportunities for youth, women and minorities.

Copperman et. al. were also interested in exploring whether anyone thought the change in mandatory retirement age would increase job opportunities for older women and older minorities. They found that as the proportion of older workers in a firm increased, respondents believed the Amendments would increase job opportunities for older minorities and older women.

Affirmative Action. Regarding the issue of equal employment opportunity goals, most respondents in a Conference Board study (Meyer, 1978) expect little change as a result of the Amendments. There are at least two scenarios which predict no change in affirmative action hiring. One is predicated on the assumption of no change in job opportunities resulting from the change in mandatory retirement age. Thus, affirmative action hiring will continue as before the Amendments. The second scenario is predicated on the priority of affirmative action hiring in the presence of reduced job opportunities. The implication of this scenario is that affirmative action hiring will continue in the presence of reduced job opportunities. Thus, if the number of job slots is reduced because of the change in mandatory retirement age, women and minorities will still be hired in an attempt to meet the goals of affirmative action, i. e. to obey the law. The second scenario is consistent with the notion that the affirmative action policies for firms occur outside normal hiring and promotional channels.

Promotional Prospects. Both the Johnson and Higgins (Harris, 1979) and the Conference Board (Meyer, 1978) studies addressed the impact of the amendments on promotional prospects for younger workers. In the Johnson and Higgins sample, more business leaders (46 percent) than current employees (34 percent) thought that older people should be forced to retire to open jobs for younger workers. Business managers in the Conference Board study anticipated little or no impact on promotional opportunities for younger workers, mainly because they anticipated minimum impact on retirement in general. Retirements are considered only one vehicle for job slots to become available. Employees leave jobs for reasons other than retirement, and new jobs are created when an industry is growing.

Of the executives who thought that the Amendments might reduce promotional opportunities, the estimates were from 10 to 15 percent fewer job opportunities to less than one-third of a percent reduction in job opportunities.

In general, these attitudinal studies provide no information regarding the underlying processes which will produce the anticipated changes. They simply present an informed opinion of what will happen. Although the sampled individuals are knowledgeable, and to that extent the information provided is useful, they do not provide information leading to the identification of the important factors which an employer weighs in making decisions about retirement policy.

B. Case Studies

As part of a case study of 50 firms' retirement policies conducted by the Department, respondents were asked: "Do you expect increasing the mandatory retirement age from 65 to 70 will affect the promotional opportunities of younger workers?" Of those who responded to the question, 4 said it would have no effect on promotional opportunities, and 22 said it would have an effect on these opportunities. However, 18 of the 22 positive responses were qualified. Two respondents suggested that expansion would outweigh any impact of ADEA, and one respondent said that inflation was the key--without inflation, ADEA would have no effect. The remaining 15 respondents qualified their responses with variations of: "Yes, there will be an impact, but it will be too small to create a major problem."

Respondents were also asked whether the Amendments will have an indirect impact on the firm's ability to employ women and minorities. Of those who responded to this question, 10 said it would have no effect, and 14 said it would have an effect. Of those who responded that it would have an effect, 8 indicated that the effect would be slight.

C. Economic Studies

Cantrell and Clark (1979) recently completed a comprehensive effort to estimate the impact of the change in mandatory retirement age on promotional prospects of younger workers. They assumed an unchanging age structure and a zero rate of growth, then calculated the average rate of upward movement in the labor force. A person's rank in the employment hierarchy was equated to the ratio of persons older to persons younger than the individual. Using age-specific mortality rates and labor force participation rates of U.S. males in 1970, Cantrell and Clark estimated the average age at which individuals will reach various ranks in the employment hierarchy.

To estimate the impact of the change in mandatory retirement age on promotions, Cantrell and Clark increased the over-65 labor force participation by 4 and then by 10 percent, the estimates of increased labor force participation resulting from the change in mandatory retirement age. Increasing the labor force participation rates created only minor delays in the age of attaining any rank, with older, more senior workers, experiencing the greatest delay. To calculate the maximum possible impact of mandatory retirement rules, Cantrel and Clark assumed that all retirements at 65 are due to mandatory retirement rules.. Under this assumption, the greatest delay at the highest rank would be half a year, while at the lower ranks individual promotions would be retarded by 5 to 10 weeks.

The Cantrell-Clark model views the labor force as homogeneous, with all workers of a given age having the same probability of being hired and promoted as any other worker. In addition, it assumes that rates of hiring and promotion are the same from one industry to another and, finally, that age is perfectly correlated with seniority and seniority is an adequate indicator of relative productivity. The results reflect average promotional prospects throughout the economy. Recognizing that the impact may be significant for some employers, Cantrell and Clark describe circumstances under which the impact of the change in mandatory retirement age will be more severe than suggested by the average delay in hiring. The factors identified as affecting the promotion rates in a firm are growth of the firm, hiring strategy, quit rate and retirement rate.

D. Labor Substitutability Research

There are two basic mechanisms by which the age structure of the labor force can change substantially. One is through demographic shifts such as increased birth or mortality rates; the other is through greater labor force participation of different age groups. An example of a change in the age structure of the labor force caused by a demographic shift is the huge increase in the number of young workers entering the labor force in the late 1960's and 1970's as the post-World War II "baby boom" cohort matured. An example of a change in the age structure of the labor force caused by greater participation of a particular age group would occur if older workers responded in large numbers to the changes in the mandatory retirement age by staying in the labor force.

In either case, as the age structure of the labor force changes, a focus of concern is the impact of the shift on the employment status and wages of the workers themselves as well as on other workers in the labor force. In terms of employment status, the question of whether the larger number of additional workers will compete for jobs with other workers of different ages becomes salient. In terms of wages, the issue of increased numbers of workers driving down wages for the enlarged group is raised.

Review of Research. The concern in this study is the potential for older workers, who choose to remain in the labor force as a result of the change in mandatory retirement age, to substitute in the labor market for younger workers. Previous studies relating to this issue are critically reviewed by Hammermesh and Grant (1979). They divide the known studies of labor-labor substitution into the following categories: studies of the production and non-production workers; studies of substitution by education group; studies of substitution among age and sex groups; and miscellaneous studies of substitution.

The third group of studies dealing with substitution among age and sex groups is the most relevant for this study. Four studies are summarized. Unfortunately, the demand models estimated in these four studies make the implicit assumption that the impact of an increase in the size of the labor force in a particular demographic category is felt by that demographic group and by other groups in the form of a wage effect rather than an unemployment effect. In other words, these studies posit that an increase in the number of older workers might lead to a drop in their wage rate (and possibly the wage rate of other groups) but not an increase in the unemployment rate. In fact, in a world of imperfect wage adjustments, one might expect both unemployment and wages to be affected.

The results imply that an increase in the number of men in a particular age category had a stronger negative effect on the group's own wage rate than on the other groups' wage rates. Thus, if there were a sizable increase in the number of older workers, the main effect would be to depress the wages of older workers relative to younger workers.

If wages were not to adjust fully to the increase in the labor force, one would expect that the resulting unemployment effect would similarly be concentrated within the older age group. Younger workers would be relatively unaffected.

Findings from the Case Studies. To find out whether workers of different ages are direct substitutes for one another, the DOL case study firms were asked whether workers aged 50-69 and workers aged 30-49 currently were performing the same jobs. If they were, employers were asked to identify the jobs that the different age groups had in common. Employers were also asked whether 50-69-year-old workers and 18-29-year-workers applied for the same jobs and, if they did, whether both younger and older applicants were hired to fill the jobs.

Fourteen respondents indicated that all jobs, and 6 indicated that quite a few jobs, were held both by workers aged 30-49 and 50-69. This compares with 6 respondents reporting that 18-29-year-old workers and 50-69-year-old workers applied for, and actually were hired for, almost all jobs within the firm. The industries represented by these 6 employers are construction, finance, insurance and real estate, manufacturing, mining, services, and wholesale trade. Seven respondents indicated that 18-29-year-old workers and 50-69-year-old workers apply for and receive entry level, non-skilled jobs.

The major difference between the response comparing the two age categories is that the 30-49-and 50-69-year-old workers are more likely to be substitutes for one another than are the 18-29-and 50-69-year-old workers. The latter group are most likely to be substitutes only for entry-level or low-skilled jobs.

3. Analysis of Direct Competition for Job Slots Between Older and Younger Workers

A. Hypotheses and Expectations

It is well known that workers often retire prior to age 65, the previous mandatory retirement age. Their propensity to retire is related to their pension coverage which in turn is closely related to firms' wage levels and the use of mandatory retirement. The more highly paid jobs are more likely to have pension coverage and be subject to mandatory retirement provisions. Lower paying jobs are less likely to have pension coverage and be subject to mandatory retirement, especially in the case of secondary jobs. The representation of workers age 65, compared to workers ages 60-64, decreases in industries and occupations with high rates of mandatory retirement; the opposite is true where the incidence of mandatory retirement provisions is low.

In addition, there are older workers who are forced out of primary jobs at the mandatory retirement age and who take secondary or part-time jobs in order to continue working. To the extent that these workers elect to continue in their primary jobs as a result of the change in mandatory retirement age, there will be reduced competition with younger workers for secondary jobs.

There are a variety of potential competitors for secondary jobs, which require low levels of specific human capital and training and, therefore, are easy to enter. In addition, secondary jobs have low wages, no job security, no fringe benefits and no future advancement. Competition for these jobs comes primarily from young workers, especially young black workers, women of all ages, and older workers. Consequently, it is in these jobs that we expect to find the greatest job overlap among older workers, women, minorities and youth. However, it is precisely workers in secondary jobs who are least likely to be affected by any change in mandatory retirement requirements.

In this analysis the effect of the change in mandatory retirement age on promotions and hiring of younger workers has not been estimated. Promotion and hiring patterns are firm-specific to a great extent. Since neither data at the firm level nor a model of the firms' hiring and promotion patterns were available, this process could not be analyzed. In addition, promotions occur over long time periods and, although the pattern of promotions may be distorted somewhat by a rise in the mandatory retirement age in the short run, a variety of factors can mitigate any adverse effects on a firm's promotional policies in the long-run. Instead, the focus in this analysis is on the potential for an immediate adverse effect on the job situation of younger workers resulting from an increased labor supply on the part of older workers due to the change in mandatory retirement age.

Due to the lack of an appropriate macroeconomic model, there is no totally satisfactory way to measure the potential impact of the change in mandatory retirement age on younger workers, women and minorities. However, a number of existing sources can be used to assess the general nature and likely magnitude of the effect.

The short-run effect will depend primarily on the number of older workers changing their retirement plans as a result of the change in mandatory retirement age. It will also depend on whether the workers who elect to continue to work hold jobs that younger workers would move into if the older workers retired.

The long-run effect will depend on a variety of factors which we cannot accurately forecast at this time. Some of these are macroeconomic such as the inflation rate. In addition, firms may alter retirement incentives by changing the structure of pension plans. Even attitudes regarding the socially acceptable or desirable retirement age could be affected in the long run, thereby contributing to a change in retirement behavior.

B. Plan for Job Slot Competition Analysis

This analysis used March 1978 Current Population Survey data to determine workers' occupation, industry, age, race, sex and wages. For each group of interest--young workers, minority workers, and female workers--a two-stage analysis was conducted. First, the potential for these workers to be in direct competition for jobs with older workers was established. If substantial potential for job slot competition was found, the magnitude of the potential impact was estimated in terms of job slots unavailable for younger workers, minority workers and female workers due to older workers' remaining in their jobs.

To assess the potential for job slot comeptition, the age distributions of workers in specific occupations, industries and occupations within industries were studied in order to characterize them according to predominant age distribution patterns. If they are young and growing, the change in mandatory retirement age should have no substantial impact on the number of available job slots. On the other hand, in an aging industry the impact could be substantial.

After this general picture of the age structure of industries and occupations was drawn, older and younger workers were compared on the best available indicator of human capital--annual wages for full-time, full-year employment.

For occupations within industries, the age distributions of workers receiving similar wages were compared. It was assumed that workers receiving similar wages in the same occupation and industry are substitutes for each other and therefore potential competitors for the same jobs. To the extent that young, minority and female workers were making comparable wages in the same occupations and industries as older workers, they were judged to be substitutes for these older workers and potential competitors for the same jobs.

Workers age 64 were compared to other (younger, female and minority) workers as the basis of the estimation procedure. This procedure was based on the observation of Burkhauser and Quinn (1980) that by far the greatest impact on retirement of the age-65 mandatory retirement age was on people reaching age 65. Therefore, it as assumed in this analysis that the age 64 group will have the greatest response to the lifting of the mandatory retirement age.

To estimate the magnitude of the effect of the change in mandatory retirement age on job opportunities for young, minority and female workers, information on the incidence of mandatory retirement provisions for particular occupations within industries and on the labor supply response of older (age-64) workers to the change in mandatory retirement age was applied. In situations where there were older workers comparable to younger workers, the known incidence of mandatory retirement provisions for a particular occupation within an industry was used to estimate the pool of potential additional comparable older workers. These were workers who previously had been subject to age-65 mandatory retirement provisions. In order to estimate the number of workers in this pool who might continue to work for one more year (i.e. past age 65), the number in the pool was multiplied by the best estimate of the number of workers expected to continue on their present jobs. In this way, an upper bound was estimated on the number of slots that will not be relinquished by older workers as the result of the change in the mandatory retirement age. This estimate of the impact of raising the mandatory retirement age is for the one-year period when workers reach age 65.

C. Summary Results of the CPS Analysis

Younger Workers. A maximum of 117,825 full-time/full-year workers age-64 and previously subject to mandatory retirement provisions were judged to have jobs comparable to workers ages 16-19 and/or 20-24 in 1977. Of the 117,825 comparable 64-year-old-workers, it is estimated that 14 percent (16,496) will continue working past age 65. These additional comparable older workers are potential competitors for 0.43 percent of the comparable workers ages 16-19 and 20-24. They represent 0.24 percent of all full-time workers ages 16-19 and 20-24.

The greatest number of wage-comparable older workers are in manufacturing, professional services and public administration. These three industries account for more than two thirds of the comparable older workers. The distribution for wage-comparable 16-19-year-old workers shows the highest concentration in the wholesale and retail trade industry, manufacturing, professional services and finance. For the wage-comparable 20-24-year old workers, the highest concentration is in professional services and manufacturing, followed by the wholesale and retail trade industry and finance.

Thus, it appears that, for both groups of younger workers, manufacturing and professional services are the industries most vulnerable to any direct job slot competition resulting from the change in mandatory retirement age. Although retail and wholesale trade have large numbers of wage-comparable younger workers, there are relatively few wage-comparable older workers in these industries to serve as a potential source of competition for younger workers. In a like manner, although the finance industry accounts for over 10 percent of both the 16-19-and the 20-24-year-old wage-comparable workers, it accounts for less than 6 percent of the wage-comparable older workers.

Table 1 summarizes the degree of potential job slot competition between wage-comparable younger workers and older workers in the same occupations and industries. Column one is the percent of wage-comparable younger workers represented by the number of comparable age-64 workers subject to mandatory retirement. This column represents the maximum amount of competition should all age-64 workers subject to mandatory retirememt provisions choose to remain on their jobs. It also represents a maximum for another reason. In this comparison of younger and older workers, it is implicitly assumed that wage-comparable 64-year-old workers compete only with wage-comparable workers ages 16-24. Clearly that is not the case, since there are wage-comparable workers in other age groups also in a position to compete with older workers should they choose to remain on their jobs.

Table 1. Percent of Younger Workers in Possible Job Slot Competition with 64-Year-Old Workers Subject to Mandatory Retirement and Additional 65-Year-Old Workers Expected to Work in the Absence of Mandatory Retirement

Industry and Occupation	Percent of Wage Comparable 16-24-year Old workers Potentially in Competition with: Workers Age 64	Workers Age 65	Additional 65-year-old Workers as a Percent of all Younger Workers in the Industry
Agr., Forest & Fish.	0.1% (103,977)	0.02%	0.01% (174,000)
Laborer	7.4% (2,130)	1.0%	
Manager	0% (103,827)	0%	
Mining	21.3% (2,497)	3.0%	0.1% (67,000)
Crafts	21.3% (2,497)	3.0%	
Construction	5.2% (63,183)	0.7%	0.09% (349,000)
Manager	22.0% (2,186)	3.1%	
Clerical	6.4% (12,269)	0.9%	
Craft	2.2% (20,460)	0.3%	
Transport Operative	17.1% (3,284)	2.4%	
Laborer	3.9% (24,982)	0.5%	
Durable Goods Manufacturing	4.3% (493,389)	0.6%	0.3% (942,000)
Clerical	21.0% (12,010)	2.9%	
Crafts	6.6% (92,464)	0.9%	
Non-Transport Operative	3.0% (372,955)	0.4%	
Laborer	9.2% (17,960)	1.3%	

Table 1. (continued)

Industry and Occupation	Percent of Wage Comparable 16-24-year Old Workers Potentially in Competition with:		Additional 65-year-old Workers as a Percent of all Younger Workers in the Industry
	Workers Age 64	Workers Age 65	
Non-Durable Goods Manufacturing	4.8% (313,039)	0.7%	0.7% (720,000)
Professional	22.0% (9,492)	3.1%	
Clerical	5.9% (82,034)	0.8%	
Craft	7.2% (74,389)	1.0%	
Non-Transport Operatives	2.0% (317,389)	0.3%	
Transport Operatives	17.8% (22,044)	2.5%	
Laborer	14.7% (5,213)	2.0%	
Service Worker	63.6% (2,278)	8.9%	
Transportation and Public Utilities	6.9% (89,305)	1.0%	0.2% (358,000)
Clerical	5.5% (55,311)	0.8%	
Craft	28.6% (8,179)	4.0%	
Transportation Operative	3.2% (25,815)	0.4%	
Wholesale and Retail Trade	0.9% (904,631)	0.1%	0.07% (1,735,000)
Managers	1.7% (104,785)	0.2%	
Sales	0.8% (218,030)	0.1%	
Clerical	0.7% (182,391)	0.1%	

Table 1. (continued)

Industry and Occupation	Percent of Wage Comparable 16-24-year Old Workers Potentially in Competition with: Workers Age 64	Workers Age 65	Additional 65-year-Old Workers as a Percent of all Young Workers in the Industry
Wholesale and Retail Trade continued			
Craft	0.9% (33,128)	0.1%	
Non-Transport Operatives	2.0% (38,227)	0.3%	
Transport Operatives	2.0% (51,530)	0.3%	
Laborers	2.0% (64,348)	0.3%	
Service Workers	0.1% (212,192)	0.02%	
Finance	1.7% (400,542)	0.2%	0.2% (373,000)
Managers	9.0% (15,919)	1.3%	
Sales	9.0% (9,058)	1.3%	
Clerical	1.2% (371,862)	0.2%	
Service Workers	3.9% (3,703)	0.5%	
Business and Repair Services	6.0% (35,588)	0.8%	0.1% (267,000)
Professional	37.8% (1,727)	5.3%	
Clerical	3.8% (9,863)	0.5%	
Craft	4.7% (23,998)	0.7%	

Table 1. (continued)

Industry and Occupation	Percent of Wage Comparable 16-24-year Old Workers Potentially in Competition with: Workers Age 54	Workers Age 65	Additional 65-year-old Workers as a Percent of all Younger Workers in the Industry
Personal Services	1.2% (16,336)	0.2%	0.02% (165,000)
Managers	4.3% (4,236)	0.6%	
Household Workers	0% (12,100)	0%	
Recreation	19.8% (1,331)	2.8%	
Services	19.8% (1,331)	2.8%	0.2% (26,000)
Professional Services	2.9% (1,063,129)	0.4%	0.4% (1,153,000)
Professional	3.9% (382,434)	0.5%	
Manager	11.3% (5,808)	1.6%	
Clerical	0.3% (378,101)	0.06%	
Craft	46.8% (1,791)	6.6%	
Laborer	11.2% (5,822)	0.13%	
Service Workers	4.3% (269,153)	0.6%	
Public Administration	10.9% (121,309)	1.5%	0.6% (295,000)
Clerical	8.8% (116,866)	1.2%	
Craft	66.3% (4,443)	9.0%	
Total	3.0% (3,792,476)	0.43%	0.26% (6,826,000)

The second column of Table 1 shows the degree of potential job slot competition between wage-comparable younger workers and the estimate of the number of older workers likely to continue in their jobs one more year. The final column shows the percent of all younger workers in an industry represented by the estimate of additional wage-comparable age-65 workers.

Column two shows that, although there may be a degree of potential competition for jobs in specific occupations within industries, the degree of potential competition by industry in general is very low. The expectation of substantial competition in manufacturing does not materialize, with a little over half of one percent of the younger workers in potential job slot competition with older workers. For professional services the potential competition is even lower. Although the absolute number of potentially competing older workers is higher in these two industries, the large number of wage-comparable younger workers in these industries tends to dwarf the competition from the older workers. Since all of the wage-comparable workers are potential competitors, the greatest competition would be among younger workers rather than between younger and older workers. This conclusion applies at the industry level; however, there may be differential factors by occupation which increase potential competition between same-occupation wage-comparable younger and older workers within an industry.

The only industries where the degree of potential competition is more than one percent are mining and recreation. For both these industries, the wage-comparable workers are in one occupation and represent a small portion of the total workers in the industry.

The occupational distribution of wage-comparable younger workers ages 16-24 and older workers age 64 and subject to mandatory retirement can be summarized as follows: The older wage-comparable workers are mainly clerical workers, operatives, craft workers, professionals and service workers. The dominant occupations of wage-comparable 16-19-year-old workers are clerical workers, service workers, operatives and sales workers. For wage-comparable 20-24-year-olds, the dominant occupations are clerical workers, operatives, professionals, and craft workers. Since clerical workers dominate all three groups, it is in this occupation that one would expect the greatest direct competition for job slots. The second most vulnerable group of younger workers appears to be operatives and, for 20-24-year-olds, craft workers and professionals.

Table 2 compares the percent of wage comparable workers ages 16-24 in each occupation to comparable 64-year-old workers subject to mandatory retirement and the best estimate of the number of workers that will work past age 65. This table shows that in only one occupation, craft workers, is the incidence of overlap greater than one percent. For all other occupations, the potential direct competiton is with less than one percent of the wage-comparable younger workers. These wage-comparable young craft workers with the greatest potential for job slot competition with additional older workers are 20-24 years old and in the following industries: mining, transportation and public utilities, professional services, and public administration.

Although clerical workers represent a full 25 percent of the wage-comparable older workers and over 32 percent of the wage-comparable younger workers, the number of estimated additional wage-comparable older workers is only 0.34 percent of the total number of wage comparable clerical workers. The small percent results from the large numbers of wage-comparable younger workers. Almost 65 percent of all the full-time clerical workers ages 16-24 have wages comparable to potentially competing older workers. Thus, the relatively small potential competition between younger and older workers is a reflection of the high potential competition among all younger clerical workers.

Virtually all the potential competition between workers age 64 and workers ages 16-24 is in jobs with salaries below the median annual wage in 1977. In fact, well over half of the comparable 64-year-old workers, all but 1 percent of the comparable 16-19-year-old workers, and all but 4 percent of the comparable 20-24-year-old workers had salaries below $14,000 per year in 1977.

Minority Group Workers. This analysis of minority workers is restricted to blacks due to limits on cell size for other minorities in the CPS tabulations. Since the focus is on the short-run impact of the 1978 ADEA Amendments on minorities, the potential for a change in the labor supply of older workers resulting from the change in mandatory retirement age to affect job slot opportunities for all minority workers regardless of age is analyzed. In this analysis, all workers age-64 are compared to black worker ages 16-19, 20-24, 25-34, and 35-59 in an attempt to establish the potential for direct job slot competition between older workers and "younger" minority workers ages 16-59.

Table 2. Percent of Younger Workers Ages 16-24 in Each Occupation Comparable to 64-Year-Old Workers Subject to Mandatory Retirement and Comparable to Estimated Additional 65-Year-Old Workers

	Percent of Younger Workers in Same Industry and Occupation		
	Percent of Wage Comparable 16-24-Year-Old Workers		Percent of All 16-24-Year-Old Workers
Occupation	Workers Age 64	Additional Workers Age 65	Additional 65-Year-Old Workers
Professional	4.5% (395,224)	0.6%	0.4% (640,000)
Managers	3.4% (132,934)	0.48%	0.14% (436,000)
Sales	1.0% (227,088)	0.13%	0.1% (347,000)
Clerical	2.4% (1,220,707)	0.34%	0.2% (1,907,000)
Craft	7.6% (261,549)	1.1%	0.3% (910,000)
Non-Transport Operatives	2.5% (728,571)	0.35%	0.26% (986,000)
Transport Operatives	6.2% (102,675)	0.87%	0.33% (266,000)
Laborers	4.6% (120,475)	0.64%	0.18% (430,000)
Service Workers	2.7% (487,326)	0.38%	0.25% (752,000)
Household Workers	0% (12,100)	0%	0% (12,300)
Farm Workers	0% (103,827)	0%	0% (134,000)
Total	3.1% (3,792,476)	0.43%	0.24% (6,820,300)

A maximum of 131,909 full-time/full-year workers age 64 and previously subject to mandatory retirement provisions are judged to have had jobs comparable to black workers ages 16-59 in 1977. Of these 131,909 comparable 64-year-old workers, 14 percent (18,467) are likely to continue working past age 65. These additional wage-comparable older workers are potential competition for 0.66 percent of the comparable black workers ages 16-59, and represent 0.4 percent of all full-time black workers ages 16-59.

Table 3 summarizes the industrial distribution of the wage-comparable black workers and all wage-comparable 64-year-old workers subject to mandatory retirement provisions. The concentration of wage-comparable older workers is in manufacturing, professional services and public administration. The concentration for black workers varies by age; however, in general, manufacturing, professional services and wholesale and retail trade are the industries where wage-comparable younger black workers are located. Thus, it would appear that manufacturing and professional services are the industries where the major competition should occur between wage-comparable black workers and additional 65-year-old workers.

The industry summaries indicate that the following industries have at least 1-percent overlap between younger black and additional 65-year-old workers: mining, construction, transportation and public utilities, finance, business and repair services, and public administration. Thus, the industries with the largest number of wage-comparable older workers do not appear to have the greatest potential for direct competition between younger minority and additional 65-year-old workers. In essence, the potential for competition between younger minority and older workers is swamped by the potential direct competition among all younger workers, since the industries with the greatest number of wage-comparable older workers are also the industries with a significantly larger number of young, wage-comparable, minority workers.

The industry aggregates are misleading, however, to the extent that high levels of potential job slot competition for an industry reflect high levels of competition for jobs in an occupation within an industry. The mining industry is a case in point where the industry total of potential job slot competition is the total for craft workers within mining.

Table 3. Industrial Distribution of Wage-Comparable Black Workers Ages 16-39 and Comparable Age-64 Workers Subject to Mandatory Retirement

Industry	Black Workers 16-19	Black Workers 20-24	Black Workers 25-34	Black Workers 35-39	All Workers 64
Ag., For., Fish.	-	2.9%	1.5%	2.0%	0%
Mining	-	-	0.1%	-	0.4%
Construction	-	-	0.4%	1.1%	2.2%
Durable Goods - Manuf.	-	13.2%	15.7%	16.0%	18.0%
Non-Durable Goods Manufacturing	13.6%	17.9%	17.6%	12.0%	16.8%
Trans. and Public Utilities	-	4.6%	3.9%	3.5%	9.0%
Wholesale and Retail Trade	38.9%	17.1%	10.3%	13.3%	6.4%
Finance	10.4%	7.6%	4.0%	3.4%	6.3%
Business Services	-	-	0.76%	0.5%	1.4%
Other Services	12.4%	1.4%	1.2%	3.7%	0.2%
Recreation	-	-	-	-	-
Professional Services	20.8%	27.8%	37.7%	36.0%	24.0%
Public Administration	3.8%	7.5%	7.0%	8.0%	14.7%
Total	99.9%	100.0%	100.1%	99.5%	99.4%
(N in thousands)	(24)	(321)	(972)	(149)	(132)

Source: 1978 CPS

Sample: All full-time/full-year workers.

Table 4 shows the occupational distribution of wage-comparable younger black workers and age-64 workers subject to mandatory retirement. The older workers are largely clerical workers, craft workers, professionals, service workers, and non-transportaion operatives, service workers, clerical workers, and professionals. (The relative frequency of these occupations varies with the age of the black workers.)

Table 5 summarizes the degree of potential competition between comparable younger black workers and older workers in each occupation. The three occupations with more than 1-percent overlap between comparable black workers and additional age-65 workers are managers, craft workers, and laborers. These three occupations do not have the greatest number of wage-comparable older-to-younger workers, and therefore, the greatest potential for job slot competition. It is also the case that the major potential for job slot competition in these occupations is between additional older workers and minority workers older than 24 since there are few wage-comparable workers below age-24 in these occupations.

Women Workers. A maximum of 125,114 full-time full-year workers age 64 and previously subject to mandatory retirement had jobs comparable to female workers ages 16-59 in 1977.

Of these 125,114 comparable 64-year-old workers, 14 percent (17,515 workers) are likely to continue in their jobs past age 65. These additional workers are potential competition for 0.16 percent of the comparable female workers ages 16-59, or 0.11 percent of all full-time female workers ages 16-59.

Table 6 shows the industrial distribution of wage-comparable female workers and all wage-comparable 64-year-old workers subject to mandatory retirement provisions. The concentration of wage-comparable older workers is in manufacturing, professional services, and public administration. The concentration of female workers is in professional services, manufacturing and wholesale and retail trade.

For young female full-time workers ages 16-24, the industries where wage-comparable additional 65-year-old workers potentially compete with more than 1 percent of the workers are manufacturing, transportation and public utilities, finance, business and repair services, and public administration.

Table 4. Occupational Distribution of Wage-Comparable Black Workers Ages 16-59 and Wage-Comparable Workers Age-64 Subject to Mandatory Retirement

(Full-time Workers)

Occupation	Black Workers 16-19	Black Workers 20-24	Black Workers 25-34	Black Workers 35-59	All Workers 64
Professional	5.1%	8.9%	18.6%	15.1%	15.3%
Manager	-	1.6%	2.3%	2.3%	6.6%
Sales Worker	-	4.7%	1.7%	1.6%	2.3%
Clerical Worker	42.5%	25.1%	22.5%	15.0%	22.1%
Craft Worker	-	4.2%	5.6%	8.2%	16.1%
Non-Transportation Operative	13.6%	25.5%	26.3%	20.3%	13.8%
Transportation Operative	-	3.8%	3.6%	4.2%	4.8%
Laborer	-	2.4%	2.3%	2.4%	4.0%
Household Worker	12.5%	-	0.6%	3.2%	-
Service Worker	26.3%	20.8%	14.8%	25.6%	14.9%
Farm Worker	-	2.9%	1.5%	2.1%	-
Total	100.0%	99.9%	99.8%	100.0%	99.9%
(N in thousands)	(24)	(321)	(972)	(1,488)	(132)

Source: 1978 CPS

Sample: All full-time/full-year workers.

Table 5. Percent of Wage-Comparable Full-Time Black Workers Ages 16-59 by Occupation in Potential Competition with 64-Year-Old Workers Subject to Mandatory Retirement and Workers Expected to Continue to Work Past Age 65 in the Absence of Mandatory Retirement

Occupation	Percent of 16-59-Year-Old Blacks with Wages Comparable to: All Workers Age 64	Additional Workers Age 65	Total Number of Full-Time Black Workers Ages 16-59
Professional	4.6% (436,288)	0.6%	623,000
Managers	13.8% (62,739)	1.9%	234,000
Sales	5.6% (34,176)	0.8%	94,000
Clerical	5.3% (534,038)	0.8%	832,000
Craft	11.1% (190,964)	1.5%	432,000
Non-Transportation Operatives	2.8% (642,987)	0.4%	839,000
Transportation Operatives	5.8% (107,568)	0.8%	319,000
Laborers	8.0% (66,177)	1.1%	322,000
Service Workers	3.3% (598,153)	0.5%	897,000
Household Workers	0% (56,218)	0%	58,000
Farm Workers	0% (55,265)	0%	66,000

Source: 1978 CPS

Sample: All full-time/full-year workers.

Table 6. Industrial Distribution of Wage-Comparable Female Workers Ages 16-24 and 25-59 Compared to Age-64 Workers Subject to Mandatory Retirement Provisions

Industry	Female Workers 16-24	Female Workers 25-59	All Workers 64
Agr., For., & Fish.	0.4%	0.7%	0.5%
Mining	-	-	-
Construction	0.6%	0.4%	0.7%
Durable Goods	5.1%	9.0%	13.9%
Non-Durable Goods	10.9%	12.9%	17.9%
Transportation and Public Utilities	2.2%	1.8%	8.2%
Wholesale and Retail Trade	17.4%	17.0%	6.4%
Finance	16.5%	7.4%	7.5%
Business Services	0.6%	0.5%	1.1%
Other Services	1.2%	1.4%	0.2%
Recreation	-	*	0.2%
Prof. Services	40.7%	43.6%	25.8%
Public Administration	4.5%	5.8%	15.5%
	99.9%	100.5%	99.9%

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*Less than .01 percent.

Source: 1978 CPS

Sample: Full-time workers.

Within manufacturing, the occupations with the highest percentage of wage-comparable workers are laborers in durable goods manufacturing and transportation operatives in non-durable goods manufacturing. There are very few young female workers in these occupations compared to the number of comparable older workers.

As pointed out in the two previous analyses, the industry distributions may be a reflection of occupational differences. Table 7 shows the occupational distribution of wage-comparable female workers ages 16-59 compared to wage-comparable older workers, and Table 8 establishes the potential competition between younger women and older workers in each occupation.

There are three occupations with competition potential greater than 1 percent: transportation operatives, laborers, and craft workers. These three occupations account for only 1.6 percent of the wage-comparable female workers and only 2.8 percent of all full-time female workers who are in these occupations. Thus, they are non-traditional occupations for women, and there are many more older workers in these occupations to compete potentially with the few younger female workers in them.

Part-time Workers. The preceding discussion has concerned competition for full-time jobs. Table 9 shows the age distribution of part-time workers by industry. In all industries, the largest portion of the part-time workforce are workers younger than 24. There also are large numbers of part-time workers in the 65+ category. Since there is no measure comparable to full-time wages with which to equate these workers, it can only be speculated that older and younger part-time workers could be competitors for part-time jobs. Since the number of part-time workers older than 65 is quite large, it is suspected that often individuals subject to mandatory retirement move into part-time jobs after reaching the mandatory retirement age.

Table 10 presents the age distribution by occupation for part-time workers. Again, there is a substantial contribution to part-time work provided by the youngest and oldest workers. When this table is compared to the age distribution by occupation for full-time workers, the contrast is striking. With the exception of household service workers, where full-time workers older than 65 constitute more than 15 percent of the labor force, there are no occupations in which full-time older workers constitute greater than 4 percent of the part-time workers in all occupations and almost 20 percent in the managerial category.

Table 7. Occupational Distribution of Wage-Comparable Female Workers Ages 16-59 and Wage-Comparable Workers Age-64 Subject to Mandatory Retirement

(Full-Time Workers)

Occupation	Female Workers 16-24	 25-34	 35-54	 55-59	All Workers 64
Professional	14.1%	30.5%	20.1%	16.1%	19.4%
Manager	2.1%	2.8%	3.8%	4.3%	11.6%
Sales Worker	4.4%	2.3%	4.1%	5.2%	2.4%
Clerical Worker	50.2%	38.3%	35.2%	32.8%	25.0%
Craft Worker	0.5%	0.9%	1.4%	1.3%	7.6%
Non Transport Operative	12.1%	13.6%	17.7%	21.2%	13.7%
Transport Operative	0.1%	0.1%	0.1%	0%	2.3%
Laborer	0.2%	0.4%	0.5%	0.1%	3.5%
Household Worker	0.6%	0.6%	1.0%	0.6%	0%
Service Worker	15.3%	10.1%	15.7%	17.6%	14.2%
Farm Worker	0.4%	0.1%	0.1%	0%	0%
	100.0%	99.7%	99.2%	99.2%	99.9%

Source: 1978 CPS

Sample: Full-time workers.

Table 8. Percent of Wage-Comparable Younger Women in Each Occupation in Potential Competition with 64-Year-Old Workers Subject to Mandatory Retirement and Workers Expected to Continue to Work Past Age 65

Occupation	16-59-Year-Old Women with Wages Comparable to: Workers Age 64	16-59-Year-Old Women with Wages Comparable to: Additional Workers Age 65	Total Number of Full-Time Women Workers Age 16-59
Professional	1.0% (2,398,928)	0.14%	3,135,000
Managers	4.0% (364,560)	0.55%	1,154,000
Sales	0.7% (415,966)	0.1%	593,000
Clerical	0.7% (4,320,990)	0.1%	6,647,000
Craft	7.9% (120,426)	1.1%	297,000
Non-Transportation Operatives	1.0% (1,749,449)	0.14%	1,985,000
Transportation Operatives	27.7% (11,374)	3.88%	33,000
Laborers	9.8% (44,822)	1.38%	127,000
Service Workers	1.2% (1,373,647)	0.16%	2,088,000
Household Worker	0% (99,325)	0%	105,000
Farm Worker	0% (14,123)	0%	17,000

Source: 1978 CPS

Sample: All full-time workers.

Table 9. Age Distribution of Part-Time Workers by Industry

Industry	16-19	20-24	25-34	35-54	55-59	60-63	64	65+
Ag., For., Fish.	48.1	9.8	9.1	15.6	3.6	3.2	0.6	10.0
Mining	8.7	29.6	27.4	8.5	0	0	0	25.8
Construction	26.4	18.5	20.3	21.1	2.4	3.3	1.2	6.7
Durable Goods	22.4	18.2	18.7	24.0	4.0	2.6	0.7	9.3
Nondurable Goods	28.4	11.9	20.3	21.6	5.1	5.1	0.3	7.3
Transp. & Public Utilities	13.2	18.8	23.6	31.1	6.5	1.6	0.3	5.0
Wholesale & Retail	42.8	18.7	12.3	15.8	3.0	2.5	0.3	4.7
Fin., Insurance & Real Estate	15.6	13.5	19.2	26.5	6.5	4.0	0.5	14.1
Business & Repair Service	26.2	17.8	18.4	22.3	3.1	2.4	0.9	8.9
Private Household & Other Serivces	32.0	8.8	12.3	21.7	6.3	4.6	1.2	13.2
Entertainment & Recreation	54.6	17.4	9.9	8.7	2.1	2.3	0.4	4.6
Professional Serv.	15.8	18.8	21.0	28.9	4.0	2.9	0.8	7.7
Public Admin.	19.0	13.3	13.2	30.0	7.6	4.5	1.3	11.1

Source: 1978 CPS

Sample: Black and white part-time/part-year or part-time/full-year workers.

Note: Percentages for each row add to 100 across columns.

Table 10. Age Distribution of Part-Time Workers by Occupation

Occupation	16-19	20-24	25-34	35-54	55-59	60-63	64	65+
Professionals	6.2	19.6	31.2	28.3	3.5	2.2	0.5	8.5
Managers	6.1	12.3	18.2	26.5	10.5	5.4	1.0	19.9
Sales	30.6	18.3	14.4	20.5	4.5	3.4	0.6	7.6
Clerical	22.9	18.3	18.0	28.4	4.5	2.5	0.5	4.9
Craft	23.5	18.7	19.0	16.9	2.5	4.7	0.8	13.9
Non-Transport Operatives	34.3	15.6	17.0	17.4	4.3	3.2	0.9	7.2
Transport Operatives	21.1	18.4	17.0	28.0	4.6	1.9	0.5	8.5
Laborer	58.4	16.7	5.1	7.3	2.6	1.9	0.4	7.6
Household Worker	34.6	4.3	7.8	24.7	7.9	6.4	1.7	13.0
Other Service Worker	37.8	17.2	13.4	18.6	3.2	3.0	0.6	6.1
Total	30.4	16.7	15.9	21.7	4.1	3.1	0.6	7.5

Source: 1978 CPS

Sample: Black and white part-time/part-year and part-time/full-year workers.

Note: Percentages for each row add to 100 across columns.

The situation is similar for younger workers ages 16-19, a group making a significant contribution to part-time work but constituting a small percent of the full-time workers in a given occupation. The 20-24-year-olds are different, since they are well represented in both the full-time and the part-time work force.

Conclusions from Job Slot Analysis

In all three comparisons (younger workers, minority workers, and women workers) the wage-comparable younger workers were concentrated in manufacturing, professional services, and wholesale and retail trade, while the additional wage-comparable older workers were concentrated in manufacturing, professional services, and public administration. Since young workers, black workers and women workers in general are concentrated in professional services, manufacturing and retail and wholesale trade, it is not surprising to find the wage comparable workers in these industries.

When these wage-comparable workers were compared to the additional older workers expected to result from the higher mandatory retirement age, the potential for significant job slot competition within specific industries did not materialize. The general pattern was that high levels of potential competition within particular industries tended to result from high levels of potential competition between workers in only a few particular occupations.

The occupations where the potential for job slot competition between younger and additional older workers seemed to be the greatest was craft workers for all younger workers; managers, craft workers and laborers for younger black workers; and transportation operatives, laborers and craft workers for younger female workers. In general, the competition that exists is between younger workers in occupations that are not customary for their groups and additional older workers. Where there are large numbers of younger workers in an occupation, the potential for job slot competition among the young workers themselves dilutes the impact of potential competition from additional older workers. However, in occupations with relatively few younger workers, any number of additional older workers represents potential job slot competition. It should be emphasized, however, that this potential competition involves a very small segment of the total work force.

Table 11 summarizes the estimates of the extent of direct competition for full-time jobs. The data show the small effect the expected number of additional older workers will have on any one of the three groups studied. The extent of the competition amounts to no more than two-thirds of one percent of wage-comparable workers in any of the three groups and to no more than four-tenths of one percent of all full-time, full-year workers in any of the groups.

Table 11. Summary Data on Estimated Additional 65-Year-Old Workers Comparable to Younger Workers, Female Workers and Black Workers

Wage-Comparable Younger Workers	Number of Additional Wage-Comparable 65-Year Old Workers	Additional 65-Year-Old Workers as a Percent of Wage-Comparable Younger Workers	Additional 65-Year-Old Worker as a Percent o all Full-Time, Full-Year Younger Worker
Younger Workers Ages 16-24	16,496	0.43%	0.24%
Female Workers Ages 16-59	17,515	0.16%	0.11%
Black Workers Ages 16-59	18,467	0.66%	0.40%

Source: 1978 CPS

Sample: All full-time/full-year workers.

PART III

LONG TERM EFFECTS OF MANDATORY RETIREMENT POLICY OPTIONS

Summary

Methodology. This report describes research on the long-run labor supply effects of alternative mandatory retirement policies. Estimates of changes in the labor force participation of older workers were projected to the year 2000 for three policy options: (1) the old law (age-65 mandatory retirement); (2) the current law (age-70 mandatory retirement); and (3) a policy that prohibits employers'use of mandatory retirement. In addition, the sensitivity of these estimates were tested to two possible changes in retirement benefits: (1) across-the-board reductions in social security benefits; and (2) larger benefits under employer-provided pensions when retirement is delayed past the normal retirement age.

Estimated effects of changes in labor force participation rates are based on a retirement decision model developed by Drs. Richard Burkhauser and Joseph Quinn for use by the Department of Labor in estimating the effects of mandatory retirement age on employment. (See Section VI). This model was applied to data for a sample of 60,000 persons from the 1973 Current Population Survey and matched Social Security Earnings Records. The projections to the year 2000 involved use of dynamic simulation techniques which take into account expected changes in demographic and economic characteristics of individuals as they age and compute entitlements to Social Security and employer pension benefits. The Burkhauser/Quinn retirement decision model--which takes into account individuals' Social Security and pension wealth and mandatory retirement constraints as well as age, wage rate, health status and other variables--was applied to estimate the labor force participation of persons between ages 60 and 70 for three points in time (1985, 1990, and 2000).

Effects of Increase in Mandatory Retirement Age to 70. The estimates indicate that labor force participation of older men* should rise as a result of the 1978 ADEA Amendments raising the mandatory retirement age from 65 to 70. Slight increases in the participation rate were forecast for older men under age 65. For instance, in 2000 the rate for men age 62-64 will be 69.3 percent* under the new law compared to 67.9 percent under the old law, an increase of 2.1 percent. For those age 60-61, an even smaller effect was found--the participation rate rises from 87.9 to 88.6 percent in 2000.

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* The effects discussed in this Summary apply to older men. Underlying problems with the data used in the retirement decision model for women preclude attributing the same degree of credibility to the estimated effects on women.

The most significant impacts on older workers remaining in the labor force were found for those age 65 and over. In all three years (1985, 1990, 2000), men age 65-67 were estimated to experience a participation rate increase from about 33 percent to about 40 percent, a rise of more than one fifth. For men age 68-70, a significant increase was also found, although the pattern was not as uniform. In 1985, the participation rate is estimated to rise from 17.6 to 22.0 percent, an increase of one fourth. In 2000, however, the rise is only by about five percent, from 18.9 to 19.8 percent. This difference over time results from the interaction of mandatory retirement policies with trends in Social Security and pension wealth for this age group, with the retirement benefit effects becoming stronger than mandatory retirement for 66-70-year-olds.

The change from age-65 to age-70 mandatory retirement will result in 217,200 more older men being in the labor force in 2000. The bulk of this increase is in the 65 to 67 age range.

Effects of Eliminating Mandatory Retirement. As in the policy changes described above, moving from the current age-70 mandatory retirement policy to a situation in which mandatory retirement is prohibited affects, but only modestly, older men who are not yet at the mandatory age. For example, in 2000 the labor force participation rate for men age 60-61 will rise from 88.6 to 89.3 percent with elimination of mandatory retirement. For men age 62-64, this rate will rise from 69.3 to 70.6 percent; for men age 65-67, the rise is from 40.1 to 42.9 percent.

However, for the age bracket that includes age 70 (the 68-70-year-old men), the participation rate rises sharply, from 22.0 to 27.8 percent in 1985, a 26-percent increase, and from 19.8 to 23.9 percent in 2000, a 21-percent increase.

Compared to the age-70 policy, elimination of mandatory retirement would result in 195,100 additional older men being in the labor force in 2000. Almost half (90,300) are in the 68-70 age group. If added to the 217,200 estimated rise in the labor force size caused by the increase in the mandatory retirement age from 65 to 70, eliminating any mandatory retirement age would induce 412,300 men to remain out of the labor force in 2000. This number constitutes about 10 percent of all male workers age 60-70 estimated for that year.

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* This rate is the proportion of men age 62-64 who had any work experience during the year.

Sensitivity of Labor Supply Effects to Changes in Retirement Benefits. Since Social Security and employer pension entitlements are among the most important factors in the retirement decision, the labor supply estimates associated with different mandatory retirement policies were reestimated under three assumed changes in retirement benefits: (1) a 10-percent across-the-board reduction in Social Security benefits; (2) a 20-percent Social Security reduction; and (3) an increase in pension benefit accruals for delayed retirement that is closer to an actuarially fair accrual rate than assumed in the simulation model. These sensitivity tests reflect current policy concerns regarding the need to contain Social Security costs and the desire to encourage delayed retirement.

The estimated effects of the social security reductions on the labor force participation rates of older men were surprisingly small in size and inconsistent in direction. The principal conclusion of this analysis is that marginal changes in Social Security entitlements have quite different implications for workers at different ages in terms of the financial desirability to them of continuing to work and accrue additional Social Security coverage and earnings credits. The estimates done in this study point to the need for more analysis of the likely impacts of future social security benefit changes in labor force participation and on the fiscal status of the Social Security Trust Funds.

The adjustment to employer pension benefits for delayed retirement that was analyzed assumed that all plans provided a 10-percent increase in accrued benefits for each year worked after the normal retirement age (or 5 percent for plans with normal retirement ages younger than 65). This adjustment is more generous than that assumed to exist currently in the majority of plans.

The more generous pension adjustment would serve to increase labor force participation both under the age-70 mandatory retirement policy and under a prohibition of mandatory retirement. It was estimated that, if pension plans were revised to encourage later retirement, the number of men age 60-70 in the labor force in the year 2000 would increase by 49,100 in the age-70 case, and by 67,700 with no mandatory retirement.

Conclusions. Several important conclusions may be drawn from these projections of the labor supply effects of alternative mandatory retirement policies. First, the downward trend in the labor force participation of older men that has prevailed for two decades should be reversed, at least temporarily, by the 1978 ADEA Amendments unless other economic forces offset the effects attributable to the new age-70 mandatory retirement policy. However, the long-term decline in older men's labor force participation should resume in the mid- to late-1980's absent other significant policy change or economic trends that depart sharply from previous long-run experience. Elimination of mandatory retirement would constitute such a policy change, and in this case the projections found that older men's labor force participation would rise not only immediately after enactment of such a policy but would also continue to rise slightly over the longer run.

A second conclusion is that the order of magnitude of the increase in the workforce that should result from the age-70 policy (a 5-percent increase) found in other studies was confirmed here and found to apply even when viewed over a long period of time.

Third, the total elimination of mandatory retirement would have a similar impact (a 5-percent increase) on the male workforce when compared to the labor force participation expected under the age-70 policy. Taken together, the 1978 Amendments and further Congressional action to eliminate mandatory retirement would add 412,300 men age 60-70 to the labor force. Thus, elimination of mandatory retirement, while helpful to employment aspirations in thousands of individual cases, would be expected to have a marginal impact on the overall labor force that is no greater than the impact of setting the age at 70 vs. 65.

Finally, targeted pension adjustments such as an increase in the rate of benefit accruals for delayed retirement can be expected to increase older workers' labor force participation, but unfocussed reforms (such as an across-the-board cut in social security benefits) should not a priori be assumed to stimulate a delay in retirement simply by virtue of constituting a reduction in available retirement income.

1. Methodology

a. Overview

The long-run impacts of alternative mandatory retirement policies reported here were developed using a series of micro-level simulation models. The basic data base used as input was the March 1973 Current Population Survey and Social Security Earnings Records (CPS-SER) Exact Match File. This data base, developed jointly by the Census Bureau and the Social Security Administration is the

March 1973 CPS Sample with the demographic supplement matched with the sample's Social Security records. Included in the Social Security data on the file are each person's covered wages for each year since 1951 and each year's quarters of coverage since 1937. Having Social Security quarters and covered wage data was important for the project. As shown in the analysis performed by Burkhauser and Quinn (See Part IV) the amount of the Social Security benefit is an important determinant of the timing of the retirement decision. Workers reaching retirement age in 2000 will have Social Security benefits based on earnings back to the mid-1950s.

For this project, a subsample of half the March 1973 CPS-SER was used. This sample was aged year-by-year from 1973 to the year 2000 using the Family Earnings History (FEH) model. This model updates a sample by determining for each year for each person in the sample whether the person's basic demographic status will change and what his/her labor force activity and earnings will be. Basic demographic characteristics that are updated are age, marital status, educational attainment, disability status, number of children for women, and whether the person will die. Labor force characteristics updated are participation in the labor force, wage rate, hours worked, and hours unemployed. Any or all of the characteristics of the person updated can be saved as longitudinal variables and added to the person's CPS-SER record. For this analysis, simulated earnings for each year after 1972 were saved on each person's record to be able to calculate Social Security benefits in the year 2000 or any earlier year.

The output file from the FEH model with each person's characteristics for the year 2000 and earlier years was used as input into a second simulation model. The JOBS model added to each person's records job histories to match the labor force histories. These histories included number of jobs held, the years the jobs were held, the industry of the job, and whether the worker was covered by a private pension plan on the job. These data were needed to compute employer pension benefits--another major determinant of the timing of the retirement decision.

Using the data from the 1973 CPS-SER file augmented by data from the FEH and JOBS models, it was possible to put together all of the data required to simulate retirement using the retirement decision model. Beginning at age 58, potential Social Security and employer pension benefits could be calculated for each year. Social Security benefits were computed using a special simulation routine which computes retired worker benefits as they are actually computed under current Social Security law. A special set of procedures was developed for imputing private pension benefits, based on data on pension coverage and job tenure added to the 1973 CPS-SER by the JOBS model and earnings history data added by the FEH model. Mandatory retirement provisions on the worker's age 58 job were also added to the supplemented 1973 CPS-SER file. These were imputed using the worker and job characteristics added to the file and procedures based on findings from DOL surveys.

Application of the retirement decision model was the last step in estimating the longer-run impact of alternative mandatory retirement policies. This simulation model was based on research carried out by Burkhauser and Quinn under an earlier task of this same project. The retirement model estimates the age at which persons in the labor force at age 58 will retire. This model adds to the basic data years and age of retirement. Included in the determinants of retirement is whether the worker is subject to mandatory retirement and at what age.

The steps in the data base development are summarized in Chart 1. In the discussion which follows, the retirement decision model is described first. Prior knowledge of its input requirements and basic behavioral functions should make the subsequent discussion more meaningful.

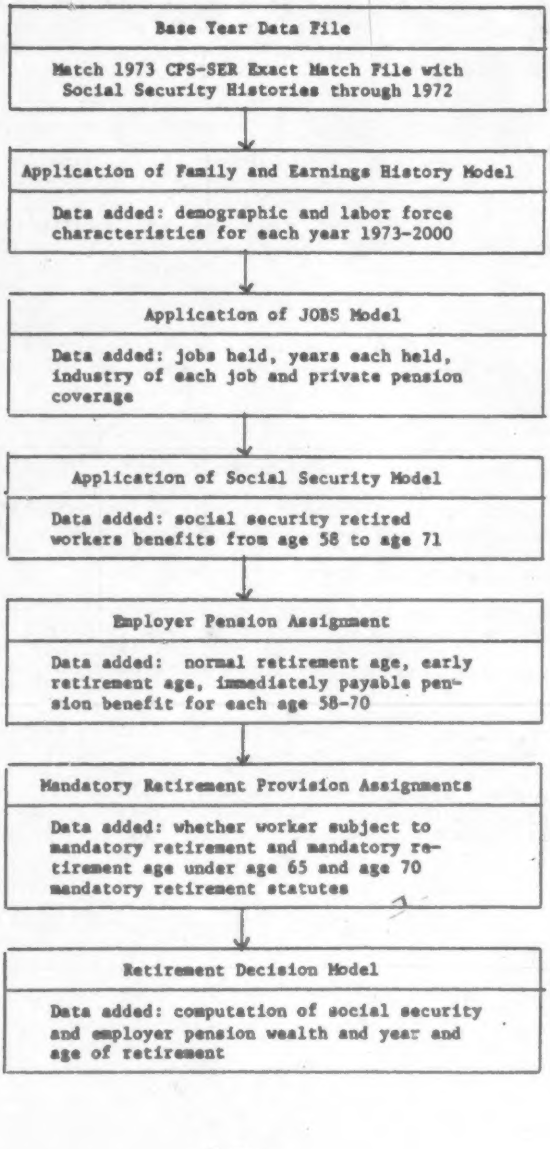
b. Retirement Decision Model

The retirement decision model is based on the research that Drs. Richard Burkhauser and Joseph Quinn completed for the Department. They used data from the Social Security Administration's Longitudinal Retirement History Survey (RHS) to study the determinants of the decision to retire. A major focus of their work was the impact of mandatory retirement age limits on this decision. Other important variables in their analysis were Social Security and employer pension wealth and changes in these types of wealth when retirement is delayed. This research is reported in Part VI of this report. The remainder of this section describes the Burkhauser/Quinn retirement decision model as implemented in a microanalytic simulation modeling framework.

For workers not subject to immediate mandatory retirement, the retirement decision model is a two-stage stochastic decision model. In the first stage, a probability is calculated for whether a worker will change jobs during the current simulation year or stay on the same job.
When a worker leaves his/her job, the second state in the simulation determines whether the worker will take a new

CHART 1

Steps in Development of Data Base for Year 2000 Application of the Retirement Decision Model


Base Year Data File
Match 1973 CPS-SER Exact Match File with Social Security Histories through 1972
Application of Family and Earnings History Model
Data added: demographic and labor force characteristics for each year 1973-2000
Application of JOBS Model
Data added: jobs held, years each held, industry of each job and private pension coverage
Application of Social Security Model
Data added: social security retired workers benefits from age 58 to age 71
Employer Pension Assignment
Data added: normal retirement age, early retirement age, immediately payable pension benefit for each age 58-70
Mandatory Retirement Provision Assignments
Data added: whether worker subject to mandatory retirement and mandatory retirement age under age 65 and age 70 mandatory retirement statutes
Retirement Decision Model
Data added: computation of social security and employer pension wealth and year and age of retirement

job or leave the labor force. A probability of accepting a new job is computed based on the worker's characteristics. If the worker does not take a new job, he/she retires. The year of retirement is recorded, all future years of labor force participation for the worker are recorded as "not in the labor force," and the simulation for this person terminates.

The following set of worker characteristics are used to compute probabilities of changing jobs and of accepting a new job:

Variable Name	Definition
HLIM	Disability status
MANRET	Mandatory retirement status
MSTAT	Marital status
FULLPP	Full employer pension benefit status
REDPP	Reduced employer pension benefit status
SSFBEN	Social security and full employer pension benefit status
SSRBEN	Social security and reduced employer pension benefit status
SSBY2	Social security eligibility status
IMPWG	Wage rate
CHGSSW	Change in Social Security wealth if retirement is delayed
CHGPPW	Change in employer pension wealth if retirement is delayed
SSW	Social Security wealth
PPW	Employer pension wealth

Because Burkhauser and Quinn did not analyze reentry into the labor force after initial retirement, no provision for reentry is made in this model. Hence, all retirements are permanent withdrawals from the labor force. Moreover, workers who were not in the labor force at age 58 for whatever reason are assumed never to reenter.

The basic outputs of the retirement model are: (1) whether workers who were between ages 60 and 70 were retired in the last year of simulation; and (2) the year (and age) that the retirees withdrew from the labor force.

c. Development of Basic Data Base. Application of the retirement model to future years required a sample representation of the future population with the variables used by the model known for each person in the sample. The starting point for developing such a sample for the years 1985, 1990 and 2000 was a subsample of the March 1973 CPS-SER Exact Match File. This file is an exact match of the March 1973 Current Population Survey (CPS) with Social Security summary earnings records (SER). The subsample used for the projections included a subsample of almost 30,000 families (59,000 persons) from the total CPS sample of almost 60,000 families.

The 1973 sample of 59,000 persons was updated year by year using the Family and Earnings History (FEH) model which updates a sample by simulating year by year the basic demographic and labor force events that affects a real-life sample of the population. For example, each year, each person in the sample is assigned a probability of dying based on age, race, sex, education, marital status and, for women, parity. Whether the person is actually assumed to die is then determined by comparing a random number drawn from a uniform distribution with the person's individual probability of dying. When a person dies, the spouse has his/her marital status changed to widowed, and any other necessary changes in the family are made. As with other events simulated by the model, probabilities of dying are adjusted over time to reflect expected future trends in mortality.

The entire set of events updated by the FEH model is listed in Table 1, along with the variables used in determining the updated status each year. For the non-labor force parts of the model, the variables selected to determine the probability of major events occurring were selected almost solely because they are strongly correlated with these events. Thus, the individual modules are not behavioral models in the usual sense. They are intended merely to produce an accurate representation of the population in a number of important dimensions such as marital status by education, age, race and sex, families appropriately distributed by region with the appriopriate number and ages of children, and a proper distribution of education among adults. Hence, the non-labor force modules are generally simple and designed so that their outputs can be easily controlled by the researcher to match, for example, projections of fertility, marital status and other important demographic trends. The labor force modules are more complicated. These are more behavioral and have been based on extensive original research. Careful attention is paid to the variance of earnings over time, to the movements of women in and out of the labor force, and to wage rate and hours differentials between demographic groups.

The output from the FEH model is an updated sample of the population for any desired future simulation year. Years simulated for this study were 1985, 1990, and 2000. The

Table I. Determinants of Major Events Simulated by the Family and Earnings History (FEH) Model

Event Simulated	Determinants
Birth	Marital status, age, race, education, number of previous live births.
Death	Age, race, sex, education, marital status, parity of women, current simulated year.
Leaving home	Age, race, sex, presence of own child
Marriage	Age, race, sex, education, whether previously married, current simulation year.
Divorce	Length of marriage, current simulation year.
Educational advancement	Age, race, sex, education of head of family, number of grades completed.
Interregional move	Age, sex, education, and marital status of family head or single individual, duration of marriage, region and current SMSA size.
Disability	Age, race, sex, education, marital status, whether disabled in previous year.
Labor force participation	Age, race, sex, presence of disability, whether participated in previous year, marital status and presence of child under six for women.
Hours of labor supplied	Age, race, sex, education, marital status, presence of child under six, expected wage, labor force supply in previous year.
Hours of unemployment	Age, race, sex, education, marital status, presence of child under six, unemployment in previous year, aggregate unemployment rate.
Wage rate	Age, race, sex, education, marital status, region, disability status, wage in previous year.

data record of each person includes the person's age, race, sex, marital status, labor force status, disability status, earnings, hours of work and unemployment, region of residence, and several other charateristics in the simulation. Attached to the person-record is also a record of the person's labor force participation history, earnings history, disability history and marital status history. These longitudinal variables are important elements for developing the Social Security and employer pension benefits that are needed as input into the retirement decision model.

In order to carry out the final computation of Social Security and pension wealth for the retirement model, it was necessary to simulate a job history to go with a worker's earnings history. The purpose of the job history was to isolate periods of employment not covered by Social Security to assure reliable calculations of Social Security benefits and to identify the length of employment spells with individual employers for computing employer pension benefits.

Job histories are simulated using the JOBS model. This model processes the labor force participation and earnings history of each person in an output file from the FEH model and attaches to the record of each person a set of job records for each job held through age 58. Each job record records the year the worker started the job, the year he/she left the job, the industry for the job, and whether the worker was covered by a single-employer pension plan, a multi-employer pension plan or was not covered. A new job record is created each time a person enters or leaves the labor force and each time the person is simulated to have a job change while in the labor force. A maximum of one job change is simulated for any given simulation year.

d. Social Security Benefits and Wealth. The output file created by the FEH model and augmented by the JOBS model is the input file for a special program designed to compute Social Security retired worker benefits. For the labor force participation history, earnings history, and job record, the Social Security simulator constructs a Social Security--covered earnings history for each worker who was between the age of 58 and 70 in the projection year--1985, 1990, or 2000 in the case of this analysis. This covered earnings history excludes: (1) earnings in the non-covered federal, state and local employment; and (2) earnings above the Social Security taxable maximum for each year. The final coverage earnings history is wage-indexed using weights appropriate to the year the worker turned age 60.

On the basis of the worker's covered earnings history, a Social Security benefit is computed for each worker for each age beginning at age 58 and continuing through age 70 (or the age in the projection year if younger). The benefit computed at each age assumes the worker stops working entirely at the current age and does not resume work at some later age..

The benefit at each age is recorded on the worker's output record. If the worker is not yet age 62, the benefit the worker would be eligible to receive at age 62 if not working is recorded. If the worker is age-eligible (62 or older), the amount of the immediate benefit if the worker stopped working is recorded.

At each age, quarters of coverage are checked to make sure that the appropriate quarters' requirements are fulfilled. If the worker fails the covered quarters requirement, a zero benefit is recorded to the age. Also recorded on each worker's record is the amount of Social Security taxes the worker would pay if he/she continued to work during the current year. These tax amounts are used in the Social Security wealth computation.

e. Employer Pensions and Wealth. Social security benefits and wealth were computed using only data generated by the simulated models and vital statistics data on survival rates. Assignments of employer pension amounts rely on data from several sources.

Basic employer pension coverage was derived from the JOBS model. Only the job held at age 58 is relevant for use in the retirement decision model. This is largely because changes in pension wealth are primarily derived from increases in benefits payable from the current employer's pension plan. Vested benefits which become payable at a specified age may affect a worker's decision to retire, for they increase pension wealth at that time. However, we were not able to take account of vested benefits from previous jobs in the analysis. Hence, the coefficients are based only on pension wealth derived from the current employer.

Workers assigned pension coverge by the JOBS model on the jobs they held at age 58 are assigned employer pension benefits in several stages. First, covered private sector workers are assigned age and years of service requirements for normal retirement under the employer's pension plan.

Next, they are assigned age and service requirements for early employer pension benefits. Then, the normal and early requirements are compared with the worker's tenure on his/her current job to determine the age he/she would be eligible for a normal retirement benefit and the age at which he/she could first be eligible to receive an early benefit. Finally, a regression procedure is used to determine the amount of the normal retirement benefit, and reduction factors are used to reduce the normal benefit for early acceptance.

When the worker reaches normal retirement age, he/she is given the full, unreduced benefit. The benefit is never increased thereafter. The stream of potential private pension benefits is used to compute employer pension wealth and changes in employer pension wealth needed as inputs into the retirement decision model.

f. Mandatory Retirement Provisions. In the retirement decision model, an important determinant of when a worker will retire is the presence of a mandatory retirement requirement. Special tabulations of the DOL survey data were used to develop procedures for assigning mandatory retirement provisions to workers in the simulation. Two separate mandatory retirement ages were assigned to each worker--a pre-1978 mandatory retirement age, and a post-1978 mandatory retirement age.

To assign a pre-1978 mandatory retirement age, it was first necessary to determine whether the worker was subject to mandatory retirement on his/her age-58 job. An analysis of tabulations from the DOL surveys indicated that sex was not strongly correlated with whether a worker was subject to mandatory retirement. However, pension coverage and industry were strong determinants. Table 2 shows the probability of being subject to mandatory retirement by employer pension coverage and industry of employment.

Workers subject to mandatory retirement are assigned a mandatory retirement age based on whether they are covered by an employer pension. Over 90 percent of workers subject to mandatory retirement prior to the 1978 ADEA Amendments were subject to an age-65 requirement.

Tabulations of the DOL survey data showed that the most important determinant of whether a worker was subject to mandatory retirement after the passage if the 1978 ADEA Amendments was whether the workers had been subject to mandatory retirement before the passage of the

Table 3.. Probability of Being Subject to Mandatory Retirement Prior to the 1978 ADEA Amendments, by Industry and Pension Coverage

Industry	Private Pension Coverage: Not Covered	Private Pension Coverage: Covered
Agriculture, Forestry and Fisheries[1]	.128	.328
Mining and Construction[1]	.128	.328
Manufacturing	.369	.709
Transportation[2]	.444	.790
Utilities and Communication[2]	.444	.790
Trade	.200	.326
Finance, Real Estate and Insurance	.517	.786
Services	.231	.467

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[1] Agriculture, forestry, fisheries and mining and construction were combined.

[2] Transportation, utilities and communication were combined.

SOURCE: Special tabulations of DoL survey data.

amendments. Table 3 shows the proportion of workers who were subject to mandatory retirement in early 1980 by whether their employees had a mandatory retirement age in 1977. The proportions are shown separately by pension coverage status and sex. Roughly 12 to 15 percent of workers with employers who had a mandatory retirement age prior to the 1978 ADEA Amendments were not subject to mandatory retirement in early 1980. In response to the amendments raising the minimum permissible mandatory retirement age to 70, the employers of these workers simply dropped a mandatory retirement altogether. Since the passage of the 1978 ADEA Amendments, a few employers who did not previously have a mandatory retirement age instituted one. In general this was unusual. However, 3.3 percent of the women covered by pension plans who were with employers with no mandatory retirement age in 1977 were subject to mandatory retirement in 1980. This could indicate the beginning of a slight trend for employers who hire large numbers of women.

The proportions in Table 3 were used in the simulation to determine the procedure of mandatory retirement requirements under current law. All workers currently subject to mandatory retirement were assigned a mandatory retirement age of 70. Less than one percent of the workers in the DOL survey were covered by mandatory retirement provisions with a later age.

g. Wage Rates. In estimating the six sets of equations that are the heart of the retirement decision model, workers' actual wage rates were not used. Instead, expected wage rates were calculated from wage rate regressions for workers age 58-61. The wage rates used in the retirement decision model were imputed using the same procedures.

The wage rate imputation equations were estimated separately for blue collar and white collar workers. Moreover, a more detailed breakdown of occupations is used within the broader blue collar/white collar dichotomy. The JOBS model, which produces the workers' job histories, includes an inter-industry mobility model. However, it does not include a model of occupational mobility. Hence, a set of procedures had to be developed to assign occupations to workers at age 58.

Once occupation is assigned, it is possible with data from other parts of the simulation to compute the imputed wage rate per hour at age 58. For each cycle through the retirement decision model, the wage rate is updated for

Table 3. Proportion of Workers Subject to Mandatory Retirement After the 1978 ADEA Amendments by Pre-Amendment Status, Sex and Private Pension Coverage

Sex of Worker and Private Pension Coverage	Whether Subject to Mandatory Retirement in 1977[1]	
	Yes	No
Not Covered By a Private Pension		
Male	.890	.009
Female	.861	.006
Covered By a Private Pension		
Male	.867	.008
Female	.829	.033

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[1] Numbers in cells are the proportions of workers subject to mandatory retirement in early 1980 after the 1978 ADEA Amendments became effective.

SOURCE: Special tabulations of DoL survey data.

changes in age and tenure. When workers are simulated to take on new jobs in the retirement decision model, the wage rate imputation procedure is repeated, with tenure reset to zero and then updated from this new base.

2. Research Findings

a. Descriptions of Policy Experiments. The data bases and the retirement decision model described were used to estimate older workers' labor force participation rates under three alternative mandatory retirement policies.

The first policy was a continuation of the law in effect prior to passage of the 1978 ADEA amendments. Under his law, workers could be required to leave their jobs at age 65 at the earliest. (The distribution of mandatory retirement provisions actually faced by private sector workers under pre-1978 law is described in detail in Part I). Prior to the 1978 ADEA amendments, 56 percent of private sector workers over age 40 were subject to mandatory retirement. Of these workers, 90 percent were subject to age-65 mandatory retirement. An additional 6 percent were suject to mandatory retirement at ages 66 to 69. Finally, 4 percent were subject to mandatory retirement at age 70. The simulations assume this distribution would not have changed greatly between now and the year 2000 without a change in the law.

The second mandatory retirement policy simulated is the current law. This law specifies 70 as the earliest mandatory retirement age but for a few exceptions. Of private sector workers 40 or older in early 1980, 47 percent were subject to mandatory retirement. With rare exceptions the mandatory retirement age for these workers was 70. The simulations assume there will be no change in the percent of workers subject to mandatory retirement or in the age requirements between now and the year 2000 without legislation to raise the legal minimum age.

The third mandatory retirement policy simulated assumes mandatory retirement was eliminated effective January 1980.

A fourth set of simulations were also run as part of this research. These simulations attempted to estimate the impact on older workers' labor force participation of not only raising or eliminating the mandatory retirement age but also of requiring employers to offer fair increases in retirement benefits to employees who continue to work after fulfilling the age and service requirements for normal retirement. Currently, many pension plans do not permit any benefit increases after a worker is eligible for normal retirement. According to the DOL plan sponsor survey, 25 to 40 percent of workers are covered by plans that permit no benefit increases to workers eligible for normal retirement. Of the almost 60 percent of workers in plans that explicitly permit benefit increases, more than a third can receive only limited benefit increases after normal retirement eligibility. Many of the plans which do not explicitly restrict further benefit accruals after normal retirement eligibility do so implicitly. Many plans place maximums on years of creditable service, have maximum benefit limits, and place other restrictions on benefits, especially those paid to long-service or high-wage employees.*

The fourth simulation assumed that all provisions which retrict benefit accruals after normal retirement eligibility would be prohibited by law. Furthermore, the simulation assumed employers would be required to give near actuarially fair increases in benefits to worker who were eligible for normal retirement benefits but continued to work. "Near actuarially fair" was defined as a 10-percent increase in the benefit for each year retirement was postponed between age 65 and 70.* For workers who were eligible for normal retirement before age 65, the simulation assumed a 5-percent increase in benefits for each year retirement was postponed.

b. Basic Findings for Men.

1. Labor Supply Effects of Mandatory Retirement Policy Options

The initial cross-section sample of 60,000 persons in 1973 yielded samples in the 60-70 age brackets for 1985, 1990 and 2000 that range from 2,292 to 2,541 for men and 2,995 to 3,207 for women. The retirement behavior of these samples was estimated under each of the mandatory retirement statutes described above and the results for each of the simulation years tabulated. Labor force participants and nonparticipants were tabulated separately for men and women in the age groups 60-61, 62-64, 65-67 and 68-70. The resulting labor force participation rates are shown in Table 4 for the years 1985, 1990 and 2000 for each age group and under each alternative mandatory retirement policy.

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* Further research would be necessary to evaluate these requirements.

* The 10-percent figure is a crude approximation of what plans could reasonably be expected to do. For males at age 65, a truly fair increase based on mortality rates slightlylower than the current rates would be about 16 or 17 percent per year between ages 65 and 70. For females, the fair increase between 65 and 70 would be roughly 12 to 13 percent a year.

Raising the mandatory retirement age increases the labor force participation rates in all age groups between 60 and 70. This is true both in the near future (1985) and in the longer run (2000). Among workers 60-64, raising the mandatory retirement age to 70 increases the labor force participation only slightly, however. As expected, the increase in participation rates is largest for workers between 65 and 67. Hence, raising the mandatory retirement age from 65 to 70 increases the labor force participation rate by nearly 7 percentage points in the year 2000, which represents an increase of 20 percent in the number of 65-67-year-old male workers.

Increases in the labor force participation rate of workers under age 65 and over 67 are very much smaller than for the 65-67-year-olds. For 60-61-year-olds in the year 2000, the predicted participation increases by only 7 tenths of a percentage point. For 62-64-year-olds, the increase is 1.4 percentage points. These increases do not result directly because of the increase in mandatory retirement age. Rather, they are the indirect result of the percent of workers subject to mandatory retirement at all after the 1978 ADEA amendments. As shown in Table 3, the number of workers subject to mandatory retirement is expected to fall by about 10 percent because of the 1978 Amendents. Furthermore, as shown by other DOL research, the probability of a worker's leaving his current job sometime between age 60 and 63 is higher if the worker is subject to mandatory retirement. Moreover, the probability of his getting a new job, rather than retiring if he leaves his job, is lower if the worker is subject to mandatory retirement. Thus, after controlling for employer pensions, Social Security and other factors, workers subject to mandatory retirement are more likely to leave the workforce in their early 60's. By reducing the percent of workers subject to mandatory retirement, a few additional workers are predicted to: (1) stay on their current jobs a year or two longer; and (2) find new jobs if they leave their current jobs.

Table 8. Labor Force Participation Rates of Older Men Under Alternative Mandatory Retirement Policies, 1985-2000

Year	Age Group	Minimum Mandatory Retirement Age 65	70	None Allowed
1985[1]	60-61	84.6	85.3	86.5
	62-64	69.5	69.7	69.9
	65-67	33.1	41.0	41.1
	68-70	17.6	22.0	27.8
1990	60-61[2]	84.9	85.2	86.0
	62-64	68.2	69.5	71.8
	65-67,	32.9	40.4	42.2
	68-70[2]	18.6	19.4	23.9
2000[3]	60-61	87.9	88.6	89.3
	62-64	67.9	69.3	70.6
	65-67	33.4	40.1	42.9
	68-70	18.9	19.8	23.9

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[1] Two outlying estimates were eliminated. Based on five replications.

[2] Age 60-61 estimates based on four selected runs. Age 65 rate for 68-70 based on first seven simulations.

[3] Based on seven replications. No judgmental selections.

For workers between 68 and 70, the effect of raising the mandatory retirement age from 65 to 70 was also very small, although more than twice as large in percentage terms than the impact on workers under 65. The labor force participation rate among these workers rose by 9 tenths of a percentage point. For this group this increase represents almost a 5-percent increase in labor force participation. This increase is in part the result of more workers having survived in the workforce to age 68 because they were no longer subject to mandatory retirement at age 65 or were no longer subject to mandatory retirement at all.

As shown in Column 3 of Table 4, eliminating mandatory retirement altogether results in still further increases in labor force participation rates among older men. In moving from age-70 mandatory retirement to no mandatory retirement, the greatest increase in labor force participation is among men 68 to 70. In the year 2000, the increase from 19.8 percent to 23.9 percent participation is a 21-percent increase in the number of men in this age group who are working. The primary reason for this increase is the difference between the behavior of men over 65 when they leave their current jobs. According to our job transition results, whether a worker takes a new job if he leaves his current employer is strongly dependent on whether the worker is subject to mandatory retirement. Older men of all ages are less likely to seek other jobs if they were covered by mandatory retirement on the jobs they just left. This effect is especially strong for men who leave jobs after age 65. Also, the probability that a worker will leave his current job is very high after age 65. According to the results, 47 percent of male workers 65 or older can be expected to leave their jobs sometime during the next two years. In the year 2000 with age-70 mandatory retirement, 34 percent of these workers are predicted to seek and find new jobs. With the elimination of mandatory retirement, 39 percent of workers over 65 who leave their jobs are expected to seek and find new jobs. This results in a 15-percent increase in the probability that workers who leave their jobs will continue to work in other jobs for at least one more year.

The increases in labor force participation rates for workers 60-67 are smaller than those for workers between 68 ad 70. However, the increase in the absolute number of men 65-67 in the labor force would actually be larger--roughly 200,000 vs. 100,000 for men 68-70. As with the oldest age groups shown in Table 4, the increase in labor force participation of the younger groups is accounted for primarily by the differences in behavior between men subject and not subject to mandatory retirement at some time but not immediately.

Before discussing differences in the impact of alternative mandatory retirement policies, some of the trends in Table 4 need explanation.

Although whether a workers gets a new job if he leaves his current employer was a very dominant factor in explaining responses to alternative mandatory retirement policies, whether workers leave their current jobs is the most important factor in determining the trends over time in Table 4 with an age-65 mandatory retirement policy. Table 5 shows the major factors in the model which influence a workers's decision to leave his current job, the direction of the impact of each variable for each age group, and the time trend of each variable for each age group.

Workers 58 to 61 who are deciding whether to leave their current jobs during the forthcoming year are less inclined to leave their jobs if they have substantial amounts of Social Security and pension wealth and can expect significant increases in such wealth by remaining with their current employers. They will also be less likely to leave their current jobs the higher their expected wage rates over the forthcoming year. Between 1985 and 2000, all of these factors experienced positive growth and, hence, reduced the probability that workers 58-61 would leave current employment.

The 62-64-year-olds in Table 4 fall partly in the first and partly in the second retirement decision age groups in Table 5. For workers 62 to 64, Social Security and employer pension wealth have just the opposite effect they have on the younger age groups--the greater the pension wealth, the greater the probability the worker will leave his current job. As both Social Security and pension wealth increased during the simulation, the proportion of workers in this age group who left their current jobs also increased. On balance, the trends in Social Security and employer pension wealth and the change in Social Security wealth dominated, and the labor force participation rates of 62-64-year-olds fell somewhat between 1985 and 2000.

The 65-67-year-olds in Table 4 fell partly in the second retirement decision age group in Table 5 and partly in the third age group. The direction of the effect and changes

Table 8. Summary of Trends in Major Determinants of Leaving the Current Job by Age of Male Worker, 1985-2000

Age Group	Variable	Impact on Probability of Leaving Current Job	Trends in Variable between 1985 and 2000
58-61	Social Security Wealth	negative	increased
	Employer Pension Wealth	negative	increased
	Change in Social Security Wealth	negative	increased
	Change in Employer Pension Wealth	negative	increased
	Eligibility for Employer Pension	positive	increased
	Imputed Wage Rate	negative	increased
62-64	Social Security Wealth	positive	increased
	Employer Pension Wealth	positive	increased
	Change in Social Security Wealth	negative	decreased
	Change in Employer Pension Wealth	negative	increased
	Eligibility for Employer Pension	positive	decreased
	Imputed Wage Rate	negative	increased
65-67	Social Security Wealth	positive	decreased
	Employer Pension Wealth	negative	increased
	Change in Social Security Wealth	negative	decreased
	Change in Employer Pension Wealth	negative	decreased
	Eligibility for Employer Pension	positive	no change
	Imputed Wage Rate	negative	no change

between 1985 and 2000 in the values of the major variables affecting leaving the current job were discussed above for 62-64-year-olds except for employer pension wealth. For workers over 65, larger amounts of employer pension wealth reduce the probability of leaving the current job. There is no obvious explanation for the direction of this effect. If there will be a large pension increase from staying on the job an additional year, the worker is more likely to remain than otherwise. On the other hand, if the worker is eligible for an immediate benefit, he is more likely to leave.

Since the trends in all of the pension wealth and change in wealth variables were in the direction of reducing the probability of workers over 65 leaving their current jobs during the next year, between 1985 and 2000 the labor force participation of the 68-70-year-olds increased.

Table 6 summarizes older workers' labor force responses in the year 2000 due to changing the mandatory retirement age from; (1) 65 to 70; and (2) from 70 to elimination of mandatory retirement. The responses are percentage increases in the labor force participation rates of the age groups.

Because of the recent change in the mandatory retirement age from 65 to 70, we can expect increased labor force participation among all ages of workers between 60 and 70. The largest increase will be among workers 65 to 67. Their labor force participation will increase 20 percent. The labor force participation rates of the other age groups of older men will increase much less.

Moving from the current age-70 mandatory retirement policy to elimination of mandatory retirment will increase labor force participation rates even more. As shown in the last column of Table 6, the additional response of 60-64 year olds will be as large as the response of these workers to the change from age 65 to 70 mandatory retirement. The response of 65-67 year olds to elimination of mandatory retirement will not be as great as their response to changing the mandatory retirement age from 65 to 70; however, it will still be substantial. The labor force participation rate of the group will rise by an additional 7 percent.

The largest long-run labor force response to eliminating mandatory retirement would be among workers 68 to 70. In the absence of other offsetting changes, the labor force participation rate of this group would increase by about 21 percent.

Part III

Table 6. Percentage Increases in Male Labor Force Participation Rates in the Year 2000 Resulting from Alternative Mandatory Retirement Policies

	Percentage Increase in Male Labor Force Participation Rates in 2000 for Change in Mandatory Retirement Age:	
Age Group	From Age 65 to 70	From Age 70 to No Mandatory Retirement
60-61	0.8	0.8
62-64	2.0	1.9
65-67	20.0	7.0
68-70	4.8	20.7

Clearly, in the absence of other offsetting change, the change enacted in 1978 will increase the labor force participation of older workers significantly. Elimination of mandatory retirement would result in further increases of a lesser but still significant magnitude. The next section shows estimates of the actual number of older workers under alternative mandatory retirement policies.

2. Adjusting Labor Force Participation to DOL Projections

During the simulations which created the basic data sets for the analysis, no trend was imposed on labor force participation rates. To the contrary, these rates were maintained at their 1985 levels in order to more easily isolate the impacts of the major retirement decision variables in the model.

Labor force participation rate projections are usually projections of monthly average rates. The simulation models, however, produce rates based on work experience during the year. Thus, in order to compare the simulated rates with rates projected by the Department of Labor, the DOL average monthly rates were converted to annual work experience rates. The resulting labor force participation rates and the projected number of male workers in each age group are shown in columns one and two of Table 7 under an age-65 mandatory retirement policy.

The third column in Table 7 shows the number of additional older males who are predicted to continue working at the turn of the century because of the change in the mandatory retirement age to 70. In all, 217,000 more men between age 60 and 70 can be expected to be in the workforce as a result of the recent 1978 ADEA Amendments. This represents a total increase in labor force participation of this group of a little over 5 percent. Well over half of the total increase will be among 65-67 year olds, those who would have been most directly affected by age-65 mandatory retirement.

According to the predictions of the retirement model, a substantial additional increase of 195,000 male workers could result if mandatory retirement were eliminated entirely. These workers would represent a 4.5 percent increase in the age 60-70 male workforce above its expected level with age-70 mandatory retirement.

Table 7. Number of Older Males in the Labor Force in the Year 2000 Under Alternative Mandatory Retirement Policies

	Age 65 Mandatory Retirement		Increase in Workforce for Mandatory Retirement Policy Change from:	
Age Group	Adjusted Participation Rate[1] (Percent)	Total Male Workforce (000)	Age 65 to Age 70 (000)	Age 70 to No Mandatory Retirement (000)
60-61	70.3	1491	12.4	12.2
62-64	54.3	1458	30.0	27.9
65-67	30.7	772	155.5	64.7
68-70	17.4	417	19.3	90.3
Total	----	4138	217.2	195.1

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[1] Rates from Table 19 adjusted to be consistent with DoL projections. See text.

The largest single impact of eliminating mandatory retirement altogether would be among 68- to 70-year-olds--an estimated additional 90,000 of these workers would remain in the labor force. As pointed out earlier, this result would occur primarily as a result of workers over 65 adopting the behavior of workers currently not subject to mandatory retirement. These workers are far more likely when they leave their pre-retirement jobs to seek new employment, presumably with more flexible hours, a less demanding workload, or both. Very little of the impact of removing age-70 mandatory retirement would be the result of workers no longer bumping up against the mandatory retirement age. Of the almost 40 percent of workers expected to be subject to mandatory retirement at the turn of the century under current law, fewer than 10 percent will be actually forced to leave their jobs because of mandatory retirement. However, these overall results indicate that mandatory retirement ages affect employee behavior through a complex process which results in earlier departure from employment and lack of re-employment after leaving the current job. Further research will be required to explain how mandatory retirement rules operate to produce these consequences.

3. Sensitivity of Labor Force Participation to Changes in Social Security

Social Security wealth and changes in Social Security wealth are major determinants of the decision to retire. The simulation results presented thus far have assumed current Social Security law would be unchanged between now and the turn of the century. This section examines the sensitivity of the male labor force participation rates to change in Social Security benefits under current (age 70) mandatory retirement policy and under a policy which eliminates mandatory retirement.

Two simple changes Social Security benefits were made for the sensitivity analysis. The first was an across-the-board reduction in benefits of 10 percent. The second was a 20-percent across-the-board reduction. The resulting labor force participation rates for males between 60 and 70 are shown in Table 8. The first column of labor force participation rates (those under current Social Security law) are from Table 4. These and all other rates in Table 8 are adjusted to be consistent with labor force trends projected by the Department of Labor. The second and third columns of rate in Table 8 are for 10-percent and 20-percent cuts in Social Security benefits, respectively.

Part III

Table 8. Impact of Across-the-Board Cuts in Social Security Benefits on Male Labor Force Participation Rates in the Year 2000[1]

Male Labor Force Participation Rates

Age Group	Age-70 Mandatory Retirement: Current Social Security Law	Age-70 Mandatory Retirement: 10-Percent Social Security Cut	Age-70 Mandatory Retirement: 20-Percent Social Security Cut
60-61	70.9	71.5	70.4
62-64	55.4	55.7	55.6
65-67	36.9	37.4	33.4
68-70	18.2	19.4	18.9

Age Group	Elimination of Mandatory Retirement: Current Social Security Law	Elimination of Mandatory Retirement: 10-Percent Social Security Cut	Elimination of Mandatory Retirement: 20-Percent Social Security Cut
60-61	71.4	71.4	70.3
62-64	56.5	55.2	58.1
65-67	39.5	35.5	39.2
68-70	22.0	21.7	21.3

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[1] Simulated labor force participation rates have been adjusted to be consistent with DoL projected rates.

Under the current age-70 mandatory retirement policy, reducing Social Security benefits 10 percent would slightly increase the labor force participation rate of each age group of 60 to 70 year old men. The largest income would be for men 65 to 67. If mandatory retirement were eliminated, as shown in the bottom half of Table 8, the result would be the opposite. A 10 percent reduction in Social Security would reduce the labor force participation of 60 to 70 year old men. The largest decrease would be for men 65 to 67. Reducing Social Security benefits 20 percent would produce mixed results under both current mandatory retirement policy and elimination of mandatory retirement. The participation with age groups would rise in some groups and fall in others.

The reasons for the results in Table 8 are not obvious. They illustrate the complexity of the interaction of the factors that influence the timing of retirement. They also indirectly illustrate a very fundamental point of the hidden dynamics of labor force participation rates among older workers.

The timing of retirement, defined here as total withdrawal from the labor force, is a two-part decision. The first decision is whether to leave the current job. The second is whether to seek other more suitable employment or to leave the labor force. Although the two decisions are influenced by the same set of factors, these factors have very different impacts on the decision to leave the current job and seek a new job versus the decision to retire completely. Furthermore, a particular factor may influence different age groups differently. Further analysis to explain these results is in progress.

4. Effects of Adjusting Pension Benefit Accruals After Normal Retirement Eligibility

There is currently considerable confusion and a lack of solid analysis of how employer pension plans treat the accrual of benefits after a worker fulfills all requirements for normal (unreduced) retirement. In the analysis of the Retirement History Survey it was assumed that benefits of all workers were frozen at the point of normal retirement eligibility. Except for government workers, this assumption was also used in the simulations reported earlier.

At the time the simulations were run, it was known that not all workers' benefits were frozen at normal retirement eligibility. In particular, the defined contribution plans, which cover roughly 20 percent of covered workers, must permit increases in benefits if they continue to collect contributions. Moreover, data from the DOL Surveys indicated that benefit accruals are permitted by many defined benefit (noncontributory) plans as well.

Table 9 shows the distribution of workers covered by various types of late retirement provision. All types of plans are included. Almost 27 percent of covered workers in the DOL Survey were in plans that offer no increases in benefits after normal retirement eligibility. An additional 22 percnet were covered by plans that have age and/or service limits on the accrual of benefits. It is not known how many workers in the survey could reach these limits by or before normal retirement eligibility. We do know that service limitations can be very restrictive, in some cases as low as 20 years.

In all, 36 percent of workers were clearly covered by plans where benefits continue to accrue without limit after normal retirement eligibility. In a minority of these cases (about 14 percent), the accrual is on some actuarial basis. In most cases, however, the accrual is based on the rules for all workers covered by the plan.

In short, it is certain that about 36 percent of covered workers continue to accrue benefits without limit and that as many as 22 percent more may receive benefit increases if they do not exceed age or service limits. For about 16 percent of workers, whether benefits continue to accrue after normal retirement eligibility is unknown.

Table 10 presents results from a simulation which gave all covered workers new actuarial benefit increases for postponing retirement. These increases were 5 percent of the normal benefit for each year of postponement if normal retirement eligibility occurred before age 65 and 10 percent per year of postponement for normal retirement at or after age 65. Currently, using an assumed 6-percent iterest rate, an acutarially fair increase in benefits for postponing retirement one year would be 16-17 percent for men between age 65 and 70. For women, the fair increase would be around 12 percent for each year retirement was postponed between 65 and 70. The lower unisex rate of 10 percent was selected because of expected inccreases in longevity over the next 20 years and because pension plans tend to be conservative in their actuarial assumptions.

Table 9. Treatment of Benefit Accruals to Workers Who Postpone Retirement Past Normal Eligibility

Plan's Late Retirement Provision	Percent of Covered Workers[1]
No provision in plan for late retirement	15.6
No benefit accruals after normal retirement eligibility	26.8
Continued benefit accruals subject to age and/or service limitations	21.6
Benefits actuarially increased based on data at start of retirement	4.8
Benefits continue to accrue with no age or service limits	31.2
Total	100.0
Number of workers	2,602

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[1] Based on tabulations of DoL survey data. In 18 cases (0.7 percent), plan sponsors responded "other." These cases are not included in the table.

Table 20. Effect of Requiring Upward Adjustments in Employer Pension Benefits After the Normal Retirement Age on Male Labor Force Participation in the Year 2000

Mandatory Retirement Policy	Age Group	Labor Force Participation (in percent) with:[1]		Change in size of Workforce (000's)
		No adjustment in benefit	Near actuarial adjustments[2]	
Age 70	60-61	70.9	69.7	-25.4
	62-64	55.4	55.4	0.0
	65-67	36.9	37.3	9.8
	68-70	18.2	20.9	64.7
Elimination of Mandatory Retirement	60-61	71.4	70.6	-18.3
	62-64	56.5	58.5	55.4
	65-67	39.5	40.1	15.5
	68-70	22.0	22.6	15.1

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[1] Labor force participation rates are adjusted to reflect DoL projected trends.

[2] Workers eligible for normal benefits before age 65 had their benefits increased 5 percent for each year retirement was delayed. Workers eligible for normal benefits at age 65 or later had their benefits increased 10 percent for each year retirement was delayed.

Under the current age-70 mandatory retirement policy, male labor force participation rates at the turn of the century would not be much affected by increases in employer pension benefits for delayed retirement of the magnitude simulated. In all, only 50,000 more men age 60-70 would be working. This is a 1-percent increase in labor force participation for this group.

For men age 60 and 61, the labor force participation rate would fall slightly. Some of these men become eligible for unreduced benefits as early as age 55, and others become eligible in their late 50s. By age 60 or 61, their benefits may have increased by as much as 15 percent. If some of these workers had been inclined to retire previously, they will be even more inclined to do so with higher benefits.

Under current mandatory retirement policy, the effect of 5-percent yearly increases in normal benefits on the labor force participation of 62 to 64 year olds is neutral. On the one hand, benefit levels are higher. On the other, the expected change in the benefit has gone from 0 to +5 percent. Some workers are more inclined to stay on during this initial period when Social Security benefits are also rising fairly rapidly (about 6.7 percent). Others, especially those subject to mandatory retiremet, respond more strongly to the increased level of the benefit and retire somewhat earlier.

For workers 65 and older, the net effect of the 10-percent yearly increase in the normal retirement benefit is to increase labor force participation by about 15 percent. Under current mandatory retirement policy, this is the only age group with a strong response to the 10-percent increases in delayed normal retirement benefits. By this age, virtually all of those covered by mandatory retirement were out of the labor force. Therefore, few workers were affected by the additional push out of the workforce of mandatory retirement.

In the absence of mandatory retirement, the increase in labor force particpation from offering increases in employer pension benefits after normal retirement would be somewhat stronger than under age-70 mandatory retirement. Without mandatory retirement, about 68,000 additional men age 60-70 are estimated to be in the workforce. This is a 1.5 percent increase in the workforce as opposed to the 1 percent observed under current age-70 mandatory retirement.

In addition to providing a larger boost in labor force participation under a policy of no mandatory retirement, new actuarial increases also encouraged workers age 62-64 to stay in the workforce an addtitional year or two. This was not so with age 70 mandatory retirement. Thus, in the absence of mandatory retirement, more of the older workers in the labor force would be in their mid- rather than late 60s.

5. Impact of Mandatory Retirement on Female Labor Force Participation

The equations on retirement behavior for women were estimated using a sample of unmarried women who were between the ages of 58 and 63 in 1969. These women were interviewed at two-year intervals through 1975 as part of the Social Security Administration's Retirement History Survey. It was uncertain how well these equations would reflect the retirement behavior of all women. Preliminary simulations indicated the results were a poor representation for older women. Therefore, the extensive analysis performed for older men was not repeated for women.

PART IV

IMPACT OF THE EXEMPT EXECUTIVE PROVISION IN THE 1978 ADEA AMENDMENTS

SUMMARY

Effects of Exempting Executive Personnel from the Higher Mandatory Retirement Age. Two years after the 1978 ADEA Amendments became effective, a DOL survey of the personnel officers of nearly 3,000 firms and an in-depth case study of 50 of the firms revealed a great deal of indecision and confusion surrounding firms' use of the authority left them by Congress to exempt executives from the increased mandatory retirement age. Although 20 percent of all personnel officers indicated that their firms either were using the exemption or were planning to apply it within a year, nearly 30 percent said their firms' executives must retire before reaching age 70. About a fifth of the larger sample and a third of the case study firms had not made final decisions about whether to apply the exemption.

Firms were slightly less likely to mandatorily retire executives than other employees. However, firms that apply mandatory retirement to other employees were significantly more likely to require executives to retire than were firms with no mandatory retirement age (72 percent versus 11 percent); nearly two-thirds of the firms requiring executives to retire did so at ages below 70.

Larger firms and those engaged in manufacturing were more likely to use the exemption than other firms. Thus, the major impact of the exemption has already been felt. Seventy-five percent of the executives eligible for exemption work for firms already using it, and personnel officers expected only a 3-percent increase in the numbers of eligibles over the next 5 years.

The main reason given by nearly half of the case study respondents for using the exemption was the need to assure promotional opportunities for younger workers; cost savings were also frequently cited.

Although the majority of firms (60 percent of the case study sample and 80 percent of the larger sample) had not availed themselves of the exemption at the time of the survey, case study responses indicate that executive retirement age was not an issue for them. The firms either had no older executives, their executives were retiring by age 65 anyway, or there was no policy encouraging retirement at a specific age.

Approximately half the non-exemption case study firms expected their policy to continue, and the remainder had made no final decision. Future adoption of the exemption by these firms will depend on the retirement behavior of the executives themselves. The recent performance of the national economy and the high inflation rate were expected to have more effect on executive retirement decisions that increases in the mandatory retirement age.

In general, the effect of the exemption has been to permit a partial retention of the old retirement age policy for those firms that have the organizational capability to administer a complex policy (the larger firms) and that have the least growth in executive positions (the manufacturing firms) and thus the greatest pressure for turnover in those jobs. Large firms and the manufacturing sector have traditionally been more likely to apply mandatory retirement and pension incentives to their older employees as a part of personnel policy.

IMPACT OF THE EXEMPTION OF FIRM EXECUTIVES FROM THE HIGHER MANDATORY RETIREMENT AGE

A. Legislative History of the Executive Exemption

The 1978 Age Discrimination in Employment Act Amendments (ADEA) permanently and categorically exclude from its provisions only one class of private sector workers--executives and high-level policymakers with pension entitlements greater than $27,000 yearly. This exemption grew out of concerns voiced by spokespersons for the business community. While the private sector registered strong reservations about the potential effects of the ADEA amendments generally, particularly dire consequences were predicted should employers not be permitted to force executives to retire at age 65. To allay these fears, the Senate Human Resources Committee voted to exempt certain highly compensated executives from the ADEA.

The executive exemption was hotly debated on the Senate floor. The pros and cons surrounding retention of the executive exemption in the bill are reconstructed below:

Removing Less Productive Personnel:

Pro:	Con:
The exemption is needed to prevent executive suites from being cluttered with unproductive and incompetent personnel.	The exemption is unnecessary. The Act permits the removal of non-productive employees. Competency, not age, should determine job performance capability regardless of the category of work involved.

Removing Less Productive Personnel: (continued)

Pro:	Con:
It is very difficult to evaluate the performance of a top executive compared to other workers. The exemption spares employers the burden of making competency evaluations. Since objective performance criteria are almost impossible to establish for this group, it is customary to permit unproductive older executives to remain until age 65. If executives could not be retired until age 70, the energy, vigor, ingenuity and freshness of American business would be sapped, since most people start flagging at age 65 if not before.	While the practice of permitting unproductive executives to coast into retirement might be aggravated by extending the Act's coverage to age 70, it is the practice itself which requires examination. Traditional staffing policies should not be used as an excuse. Employers must make the tough decisions on competency they want to avoid. The exemption is merely a convenience for those unwilling to face the shortcomings of their own ingrained practices. It has nothing to do with the ability to perform.
The exerption saves face for executives coasting into retirement, sparing them the embarassment and stigma of a competency-base forced retirement.	It is not fair to save the face of the few incompetents who might wish to remain beyond age 65 at the expense of the many performing satisfactorily.
Mandatory retirement is a fair, uniform retirement policy. The exemption would provide much needed flexibility to business. Since nothing in the exemption requires that executives be retired at age 65, those performing extraordinarily valuable service would most likely remain on the job.	No evidence has been provided that age is a bona fide indicator of job performance for high-level executives. Since the Act provides an exception where age is actually a factor in an individual's ability to perform a job, the exemption is unnecessary.

Promotional Opportunities

Pro:	Con:
An automatic retirement age of 65 for top-level management personnel is recognized and widely used as an effective and proven way to achieve the regular and predictable turnover on which corporations depend to assure constant replenishment of new ideas and perspectives at the top-most decision-making levels. Without the ability to force the retirement of executives at age 65, employers could not assure executive level promotional opportunities for younger workers.	Compulsory retirement is not necessary to keep lines of progression open. Corporations have successfully used other management techniques such as limiting years of service in a position, increasing pension benefits for early retirees, and counseling employees to achieve desired levels of turnover. Executives are no more likely to stay past age 65 than other workers.
A logjam in executive retirements would cause good, talented people to leave in the absence of promotional opportunities. Upward mobility of women and minority group members moving through middle management will be stalled unless there are top spots and ancillary promotions available to them.	The argument that younger workers' ambitions should be a factor may be unlawful. A federal court specifically rejected as illegal the argument that personnel practices affecting older workers could be based on a policy of enhancing the status of younger ones. The exemption is discriminatory, arbirtrary and unjust. It sets the bad precedent of a categorical exemption to a civil rights law. It amounts to class discrimination against persons with pensions above an arbitrary level.
The exemption provides a real benefit to business while applying to a very small group who will suffer no real economic hardship.	The problems raised with executives' remaining in their jobs exist in other occupations as well. Why should arguments unsuccessfully made against raising the age cap in the Act for other workers result in an exemption for executives?

In the House-Senate conference, agreement was reached on a modified version of the executive exemption. In response to concern that low-level managers, supervisors, or blue collar workers could be mandatorily retired at age 65 under the Senate amendment, the minimum retirement income was raised to an unindexed $27,000 per year, and the exempt group was more explicitly defined as "bona fide executives" or occupants of "high policymaking position's" for at least two years before he/she may be considered exempt, was added to prevent employers from using executives' promotions to circumvent the law.

The elimination of cost-of-living adjustments to the retirement income floor is somewhat problematic in light of evidence that considerable effort was expended to define the exempt population precisely and narrowly. Increasing salaries and related retirement incomes could greatly expand the exempt population over time which might alter the original intent of the provision.

B. Industry Studies of Employer Response to Exemptions

Soon after the 1978 Amendments became law in April 1978, The Conference Board elicited comments from its four personnel management council members on the expected impact and industry response to the law. In their report, the executive exemption was mentioned only once. Many of their respondents were reported as considering the executive exemption to be "a key factor in keeping promotion lines open." A possible bonus was also foreseen in a ripple-down effect, where second-level managers near age 65 and reluctant to adjust to new bossess would also plan for retirement at or before age 65, since their bosses must retire by then. The Conference Board study made no attempt to ascertain how widely the exemption might be used.

In November-December 1979, Hewitt Associates surveyed 900 members of its Compensation Exchange. The published results (Hewitt Associates, 1980) revealed that, of the 575 companies responding, 26 percent were using the executive exemption, 55 percent were not using it, and 19 percent were undecided. Their data (Table 1) also show that, among manufacturing companies, use of the exemption is significantly related to corporation size, with large corporations more likely to compel executive retirement at age 65 (44 percent) than small ones (9 percent). Conversely, small companies were more likely than large companies to not use the exemption (79 vs. 39 percent). The Hewitt report speculated that the lower incidence of use of the exemption among smaller companies and the degree of uncertainty may change as corporations have more time to evaluate their positions.

Part IV

Table 1: Use of the Executive Exemption Under ADEA in the Hewitt Study

Survey Responses		MANUFACTURING COMPANIES			ALL MANUFACTURING COMPANIES	NON-MANUFACTURING COMPANIES	ALL SURVEY COMPANIES
		Annual Revenues ($ million)					
		< $100	$100-499	≥ $500			
Use Exemption	#	9	22	62	93	56	149
	%	8.8%	16.9%	44.3%	25.0%	27.6%	25.9%
Don't Use Exemption	#	81	77	54	212	107	319
	%	79.4%	59.2%	38.6%	57.0%	52.7%	55.5%
Undecided	#	12	31	24	67	40	107
	%	11.8%	23.8%	17.1%	18.0%	19.7%	18.6%
Survey Totals	#	102	130	140	372	203	575
	%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Hewitt, "Hot Topics in Employee Benefits," January 1980.

C. Summary Analysis of Department of Labor Data

Case studies of 50 firms were conducted in order to analyze firms' use of the executive exemption. Related questions were asked of these firms in questionnaires administered to personnel departments and pension plan sponsors for a larger sample of firms. A summary analysis of the case studies and the data from the larger sample is presented here.

In the larger sample of nearly 3,000 firms, 20 percent were using the executive exemption or planned to use it within a year. Sixty percent were not using it and did not plan to use it. The remaining firms were undecided regarding future plans. Large firms and manufacturing firms were more likely than others to use the exemption.

The 50 case studies revealed that firms using the exemption gave as their reasons, assurance of promotional opportunities (about half cited this reason) and cost savings (cited by a fourth of these firms). Primary reasons for not using the exemption were that: existing retirement incentives resulted in early retirement; no eligible executives were near age 65; and the exemption affected so few people it was not worth the administrative burden.

The net result of the exemption thus far appears to be that, for those case study firms that have a mandatory retirement policy, the possibility of keeping the age below 70 for some employees was an attractive one selected by 44 percent of such firms. These firms are those most able to adopt complex personnel policies (the large firms) and those with an older workforce and less growth in positions (the manufacturing firms). On the other hand, of the firms not applying mandatory retirement to its general employees, very few (8 percent) chose to retire executives before age 70.

1. The Case Study Analysis

A surprising finding from the case study analysis is that, two years after passage of the ADEA amendments, about half of the 50 firms in the case studies were either uncertain of the implications of the executive exemption, ill-informed of its specifics, undecided whether to use it, or in the process of deciding. Many respondents were largely ignorant of the exemption and its implications and, consequently, gave confusing and sometimes contradictory answers to questions. The problems of how the exemption would be applied and the covered group defined had been addressed and resolved by relatively few firms, mainly those with very large labor forces (more than 40,000 workers).

Firms undecided about the exemption appeared to take one of two approaches while their policy is being developed: (1) the prior mandatory retirement age of 65 was continued for executives without formal adoption of the exemption; or (2) the age was officially raised to 70 for the eligible executives.

Due to the confusion, the proportion of firms officially adopting the exemption could not be pinpointed, but it is probably about 40 percent of the 50-firm sample. The very large firms (those employing 40,000 or more) and the manufacturing firms were more likely to use the exemption than the smaller firms or the non-manufacturing firms.

When firms using the exemption were asked what factors promoted its use, nearly half cited assuring promotional opportunities, and one quarter mentioned cost savings. Firms also wished to use the exemption as a way to remove selected executives or simply to continue traditional retirement policy.

The majority of the firms did not use the exemption at the time of the study, and they gave predominantly pragmatic reasons for this decision: existing retirement incentives were producing satisfactory results; no eligible executives were near age 65; the exemption would affect too few people to justify the administrative burden. Fewer than one-third of these firms cited a corporate philosophy of permitting or encouraging work past age 65 or the need to maintain equitable treatment of all employees as reasons for not adopting the exemption.

For most of the case study firms not now using the exemption, executive retirement age had not become a matter of importance, but should promotion lines become blocked, upper levels stagnate, or executive retirement decisions run counter to the firm's wishes, the exemption would be used by most firms that now find it unnecessary. Fewer than 30 percent of the 50 case study firms had made a definite decision against use of the exemption.

It appears that the executive exemption is not an issue in many case study firms because their executives currently retire by age 65. Retirement by age 65 is nearly as firmly entrenched among non-exemption firms as among firms using the exemption. It appears that between 70 and 80 percent of the eligible executives in the case study sample firms were exempt. These estimates are very sensitive to the sample characteristics, however. If one extremely large firm using the exemption is removed, the proportion of eligible executives that was exempt drops below 65 percent.

Regardless of what the precise figures may be, the fact remains that the majority of executives working for large firms with a mandatory retirement policy are subject to a mandatory retirement age of 65, and more executives are likely to join their ranks if the law remains unchanged. If executives from firms indicating that the exemption could possibly be used in the future are added to those already subject to the exemption, as many as 85 percent of these executives would be forced to retire at age 65.

Although the failure to index the $27,000 pension limit was expected to contribute to any increase in the number of executives eligible for the exemption, the case study firms do not expect the increase to be substantial over the next two to five years. The case study firms using the exemption expect a total of 87 more exempt executives by 1985, an increase of only 3 percent. Only one of these firms gave the unindexed dollar limit as the only reason for the expected increase; increasing numbers of executive positions was an equally important factor in this projection.

2. Analysis of the Larger Sample

The results of the analysis of responses to the personnel items administered to the larger sample of firms presented in Table 2 are in general, consistent with Hewitt's findings and the case study analysis. Twenty percent of the nearly 3,000 responding firms in the sample were using the exemption or planned to apply it within a year, 60 percent were not using it and had no plans to use it, and 19 percent were undecided. Large firms (those employing 6,000 or more workers) and manufacturing firms were more likely to use the exemption than smaller non-manufacturing firms. The somewhat lower incidence of use found in the DOL sample is likely to be due to the inclusion of more non- manufacturing firms than Hewitt's sample, and more small firms than the case study sample.

Evidence of the confusion found in the case study analysis was also present in the larger sample. Four percent of the firms not using the exemptions nonetheless required their executives to retire at an age below 70 years as did 15 percent of undecided firms.

Table 3. Use of the Executive Exemption Under ADEA in the DoL Sample of Firms

Executive Retirement Policy	Percent of Manufacturing Firms			Percent of Service Firms			Percent of Other Firms			Percent of All Firms
	No. of employees		All Mfg Firms	No. of employees		All Service Firms	No. of employees		All Other Firms	
	20 to 999	1,000 or more		20 to 999	1,000 or more		20 to 999	1,000 or more		
Exemption in Use or Planned	5.3	52.7	39.9	3.0	21.6	13.2	3.0	26.3	15.4	21.9
Exemption not in Use or Planned	66.8	29.7	39.8	77.6	60.9	68.5	75.2	48.3	60.9	58.7
Undecided	27.9	17.6	20.3	19.4	17.5	18.3	21.8	25.4	23.7	19.4
Total	100% (262)	100% (706)	100% (968)	100% (821)	100% (996)	100% (1817)	100% (101)	100% (114)	100% (214)	100% (2999)

When the firms' mandatory retirement policies for executives and other occupation groups were compared, Table 3 shows that executives are slightly less likely to be subject to mandatory retirement than other occupation groups. Nearly 30 percent of the firms having a mandatory retirement age for other employees had none for their executives. Only 11 percent of the firms had a mandatory retirement age for executives but none for other employees. However, when firms did require their executives to retire at some age, that age was most often below 70 years.

Since large firms were more likely to avail themselves of the exemption, most eligible executives in the sample firms were already exempt from the 1978 ADEA Amendments. Seventy-five percent of the 75,556 executives were either already subject to the exemption or would be within a year, a finding which supports the case study results.

The findings from the larger sample also confirm that employers do not expect a significant increase in the number of executives eligible for exemption. Responding firms expect that an additional 2,310 executives will meet the exemption criteria in five years, an increase of only 3 percent.

Table 3. Comparison of Firms' Executive Mandatory Retirement Policy to that for Other Occupations

Required Executive Retirement Age	Mandatory Retirement Policy for Surveyed Employees' Occupation		
	Firms with:		
	MRA	No MRA	All Firms
MRA Below 70	43.6%	8.5%	27.2%
MRA 70 and over	28.5	2.7	16.4
No MRA	27.9	88.8	56.4
Column Total	100% (1576)	100% (1388)	
All Firms	53.1%	46.9%	100% (2964)

PART V.

EFFECTS OF THE TENURED FACULTY EXEMPTION IN THE 1978 ADEA AMENDMENTS

Summary

This section of the report examines the impact on higher education of the expiration of the exemption for tenured college faculty members from the mandatory retirement age provisions of the 1978 Amendments to the Age Discrimination in Employment Act of 1967 (P.L. 95-256).

The major questions given attention in this study are: (1) What are the origins and impact of longstanding mandatory retirement age policies in higher education? (2) What are the attitudes of faculty members and administrators to retirement and to alternative policies with respect to the age of mandatory retirement (including the current exemption and its expiration)? (3) What are the likely direct (first-round) effects of different policies on mandatory retirement age (including the exemption and the expiration)? and (4) What are the likely adaptations by the higher education sector to the direct effects of these policy changes?

In attempting to answer these questions, several approaches are followed, including examining existing knowledge and data, the results of two specially designed surveys developed for this study, several models of institutional and faculty behavior, and simulations of effects over the next several decades of continuing the exemption versus allowing it to expire in 1982.

1. Problems and Prospects Facing Higher Education

The impact of a mandatory retirement age change will depend in part on the adjustments made by institutitons and their faculty members to other problems facing higher education during the next decade. Thus, it is important that these other issues are understood and considered when the likely effects of a change in the mandatory retirement age are examined.

a. Emerging Problems in the 1980s

(1) Enrollment Changes in the 1980s. The projections for the 1980s give a mixed picture, with some experts predicting declines in enrollments while others foresee increases. Much of the variation hinges on the growth of what are called non-traditional students, since the potential for enrollment growth from the traditional college age population is limited because of declines in birth during the late 1960s and the 1970s. The rising demand for higher education by persons beyond the age of typical college students and for continuing

education and training could, if strong enough, offset the drop in demand from the college age population. The net result is not yet clear, however, and this accounts for the great uncertainty about the impact of enrollment changes on the demand for faculty members in the 1980s.

The import of prospective enrollment declines should be clear. In an era of growth it will be easier to accomodate the expiration of the mandatory retirement age exemption because institutions might not need to significantly reduce their rate of hiring of new young faculty members. If no enrollment growth is likely, this will force more substantial reductions in new hires until a new stable pattern of retirements emerges in response to the demise of the exemption. If enrollments actually decline significantly, layoffs of already-employed faculty may be required to accomodate these delines. Whatever happens, certain types of institutions, namely the four-year liberal arts colleges, will continue to be heavily dependent on the traditional college student population for their enrollments. Hence, they are most likely to be adversely affected.

(2) Aging of Faculty Members. The aging of faculty members is almost inevitable, given the extensive hiring of new faculty members to staff the enormous expansion of higher education in the 1960s, the slower growth of the early 1970s, and the minimal growth projected for the 1980s. The impact of this aging is less clear. Without doubt, if the exemption is allowed to lapse and the mandatory retirement age rises in affected institutions from 65 to 70, over time an increasingly larger proportion of faculty members will have the opportunity to continue teaching past 65.

(3). Financial Constraints. The tightened financial situation for higher education--both for private institutions dependent on private donations and endowments and for the larger public sector directly affected by tax changes and spending cuts--will reduce its ability to adapt to changes of any kind, including changes in the age of mandatory retirement. Given that professors nearing retirement are generally paid about twice the salaries of newly entering faculty members, the decision of any substantial number of faculty members to continue teaching until age 70 will raise the costs of total compensation. Efforts to stimulate the early retirement of faculty members will be made more difficult, because of the inability of institutions to find resources to provide early retirement inducements.

(4). The Impact of Inflation. The inflation rate is almost certain to affect faculty decisions about retirement because the real salaries of faculty members have declined by 15-20 percent over the past decade.

b. Health and Expected Retired Life of Faculty Members

Faculty are a longer-lived and healthier group than is the general population. The self-reported health status of faculty members is better than is indicated by responses to survey health questions on surveys of the general population. The death rates and expectation of life of older faculty members are considerably lower and higher, respectively, than for the general population. From age 60 onwards the death rates are only about half as high as for the general population; the expectation of life is from 25 to 40 percent longer. Thus, faculty members are much more able to continue working beyond age 65 than is the case for other workers.

c. Trends Toward Earlier Retirement by Faculty Members

Despite forces that would seem to cause faculty members to delay retirement, there is evidence that faculty members are retiring at progressively earlier ages. To the extent that faculty members have been retiring earlier, this may be due to increased pension benefits as well as the trend toward earlier retirement in the rest of the population. Whether the effects of inflation and smaller Social Security increases in the future will reverse the effect of past increases in pension benefits is an important question on which evidence should begin to emerge very shortly.

d. Major Assumptions About the Impact of Lifting the MRA Exemption

(1). Impact of Continuance of Faculty to Later Retirement Age

a) Compensation costs of colleges will rise.

b) Colleges and universities will be more limited in their ability to hire new faculty members.

- c) Greater difficulties will be encountered in meeting the goals of affirmative action.
- d) Tenure granting policies and tenure itself will come under closer scrutiny.
- e) Pressures will mount to find ways of dealing with faculty members whose performance is impaired by age.
- f) Efforts will intensify to devise programs to stimulate the earlier retirement of faculty members.

(2) Duration of Impact

- a) The duration of the impact of a change in MRA will be fairly short lived.

(3) Distribution of Impact

- a) The distribution of the impact will vary among different kinds of colleges and universities depending on differences in age structure and current mandatory retirement age.
- b) Whatever the age structure, small colleges will face a more difficult adjustment to a change in mandatory retirement age.
- c) The effect will differ for different faculty groups, based on such characteristics as sex, productivity, and institutional location.

2. Background

This section describes the evolution of mandatory retirement and tenure practices in higher education. An understanding of the rationale and variation among institutions is necessary in evaluating the impact on higher education of change in the minimum allowed age of mandatory retirement.

a. Evolution of Mandatory Retirement and Pension Practices

The evolution of mandatory retirement in higher education is closely connected to the history of pension plans. Our discussion focuses on the evolution of state public retirement and TIAA-CREF plans that cover over 90 percent of all faculty in the national faculty survey.

The development of pensions and associated mandatory retirement age policies in higher education reflects the public-private division of this sector. Public institutions covered by state pension plans have historically had a later mandatory retirement age than have private institutions. This division conditioned the inability of higher education to agree on a united policy in reacting to the 1978 ADEA amendments. This division has also meant that an important group of institutions has adhered more closely to state public policies than to guidelines of the American Association of University Professors on mandatory retirement age. However, a proposed elimination of mandatory retirement age may result in a different response. While State and private institutions have not agreed to a specific mandatory retirement and extension policies, most institutions have a mandatory retirement age.

b. The Meaning and Evolution of Academic Tenure

The development of academic tenure was based on the desire of academic institutions to protect the academic freedom of faculty members, i.e., their ability in their teaching to deal with controversial issues without fear of losing their jobs. Thus, the costs imposed on higher education by tenure rules have been accepted as necessary to achieve another outcome, namely academic freedom.

c. Changes in State Legislation Since the Passage of the ADEA

Changes since 1978 in State legislation covering mandatory retirement age are detailed. Most changes have raised the State minimum mandatory retirement age to conform with the federal law, with many States including a faculty exemption. Unless States move to amend their laws further, the expiration of the ADEA faculty exemption will have an immediate impact on the legality of mandatory retirement provisions within the great majority of states. In all but a few States, Federal law must be considered the binding constraint on an institition's ability to adjust their mandatory retirement age policies.

d. Attitudes of Administrators and Faculty Members

Information on the attitudes of administrators and faculty members toward the exemption is rather limited. A 1979 study by the American Council on Education indicated strong opposition to uncapping the age of mandatory retirement as well as considerable concern about shifting to age 70 after expiration of the exemption for tenured faculty members. Half the institutions said they planned to make use of the exemption; most of the remainder could not do so because they already operated with a mandatory retirement age of 70. Two-thirds of the institutions indicated they would favor making the exemption a permanent one, with the strongest support for this position coming from the private institutions. Tenured faculty members age 50 and above, as shown by our survey, were strong in their opposition to continuation of the exemption with 70 percent favoring the lapse of the exemption. A somewhat smaller majority of 60 percent favored complete uncapping of the age of mandatory retirement. Whether younger faculty members would agree with these sentiments is not known.

3. Results From Institutional Survey

a. Definition of Retirement

We define retirement as that age at which a person shifts from a regular job at a particular institution. In looking at retirement policies, normal, early, mandatory and compulsory retirement age are examined.

b. The Institutional Setting

(1) Tenure. Although the definition of tenure remains to be clearly defined by federal regulations covering the ADEA amendments, limiting the exemption to institutions with well-defined tenure systems would not exclude a large number of institutions. In our sample almost 92 percent of currently employed full-time faculty members aged 45 and above are employed in schools with tenure systems. Two-year institutions are least likely to have tenure systems.

(2) Mandatory Retirement. We examined mandatory retirement ages at our responding institutions both prior to the passage of the 1978 ADEA and at the time of our survey (1980).

a) Mandatory Retirement Provisions Prior to ADEA Amendments. Prior to the 1978 ADEA Amendments 79 percent of responding institutions had some age of mandatory retirement. Almost 70 percent of these institutions set this age at 65; and 19 percent had a mandatory retirement age of 70 or over. Another 6 percent had an age of 66-69 and 5 percent did not specify their mandatory retirement age. The public-private division is clear with only 41 percent of public universities setting an age of 65 compared to 70 percent of private universities. At that time, about half of all full-time faculty members were employed in institutions with a mandatory retirement age of 65.

b) Changes Prompted by ADEA Amendments. Almost 30 percent of responding institutions have made some change in their mandatory retirement age since January 1, 1978. These changes took place place primarily among public institutions. Thirty-eight percent made some change as contrasted to only 18 percent of private institutions. Only 27 percent of all private institutions with a mandatory retirement age below 70 made changes as contrasted to 55 percent of similar public institutions.

c) Mandatory Retirement Provsions in 1980. As a result of these changes only 36 percent of public institutions had a mandatory retirement age of 65 at the time of the survey compared to 61 percent prior to 1978. The percentages for the private sector are 57 and 78 percent, respectively. At the time of the survey one-third of all full-time faculty members were employed in institutions with a mandatory retirement age of 65. Half were covered by age 70 mandatory retirement age while 13 percent were not subject to mandatory retirement. The percent subject to a mandatory retirement age below age 70 had fallen from 69 to 35 percent since the passage of the ADEA Amendments.. While the percentage of faculty not subject to a mandatory retirement age has doubled, only a small fraction (13 percent) remain in institutions without mandatory retirement provisions.

Thus, although the expiration of the exemption may be important for particular types of institutions, it will affect only about a third of all full-time faculty members. However, raising the age of mandatory retirement above 70 or its elimination altogether will force an alteration in policies covering most of higher education--87 percent of faculty members and 76 percent of institutions.

(3) Compulsory versus Mandatory Retirement. Most institutions allow extensions of employment beyond the stated mandatory retirement age at the discretion of the administration. While not granted to all faculty members, such extensions provide flexibility to faculty members and their institutions. Only 4 percent of all institutions report that retirement is compulsory at age 65. Of the 34 percent of institutions with a mandatory retirement age of 65, less than 10 percent also have compulsory retirement at that age.

(4) Age Distribution of Faculty. Most striking is the broad similarity in the age distribution of faculty age 45 and over across different types of institutions. Within each type, however, there is some variation in the percentage of faculty within five years of normal retirement age. Thus, while no particular type of institution is uniformly confronted by a particularly old or young faculty, a few institutions within each group will be faced with the possibility of adjusting to the changed retirement plans of a large proportion of their faculty members--those now approaching normal retirement age. Thus, targeting policy on a particular type of educational institution defined by size, control or type, will not alleviate the difficulties faced by those institutions with an older age structure.

(5) Projected Student Enrollments. Over the next few years, institutions in our sample predict neither sharp declines or sharp increases in student enrollments. The fact that private universities are most pessimistic in their enrollment projections may be important in predicting their responses to proposed changes in mandatory retirement age legislation.

c. Retirement Benefits and Their Impact on Retirement

(1) General Characteristics. Almost 95 percent of full-time faculty members are employed in institutions with either a TIAA-CREF or State plan. For this reason the focus is on these two types of plans.

(2) Annuity Value of Pension Benefits. We calculate benefits from each type of plan based on a standard earnings history for full-professors who started work at age 32. There is a considerable variation across State plans in the benefit for which such a person would be eligible at age 65, with a mean value of

$18,824. An additional year of work would increase this annual benefit by an average of 11 percent. However, an additional year of work would mean a decline in the present value of expected future benefits (discounted at 10%) by 2 percent. Despite the different method of calculating TIAA benefits, the means and changes in annuity values are remarkably similar for a person with this standard earnings history working in a TIAA subscribing institution.

(3) Inflation and Retirement Benefits. The effect of pre- and post-retirement inflation on the real value of retirement benefits is discussed. Many State plans allow some kind of post-retirement benefit adjustments although the maximum adjustments of between two to five percentages points are far below current inflation rates. The advantages of continued work as a hedge against inflation are discussed, with examples given. Later retirement shortens the period over which retirement benefits are received, reduces the risk of real declines, and increases the initial benefit amount. Compounded, post-retirement inflation adjustments reduce the real loss in benefits of early retirement. Without such adjustments, prospective retirees can anticipate significant gains in real benefits if retirement is delayed.

d. Early Retirement Incentives

Few institutions responding to our survey offer early retirement incentives in lump-sum form or which are not integral parts of their present retirement plan. A large percentage indicate that they have an early retirement program that is part of the pension plan, although upon closer examination most proved to be optional tax deferred annuities. We conclude that few institutions offer programs targeted specifically on early retirees. Tax deferred annuities may be seen as early retirement incentives because administrators are aware of the importance of benefit amounts in determining retirement timing. However, such annuities are not uniquely targeted on early retirees.

Reductions in workload prior to normal retirement are offered by a large percentage of institutions, although those with an age 70 mandatory retirement age are more likely than those with a 65 mandatory retirement age to allow faculty to work reduced hours. This suggests that institutions with a higher mandatory retirement age have adapted in part by offering the reduced work load option.

e. The Effect of a Mandatory Retirement Age on the Probability of Retiring

We examine for each institution the probability of a cohort of faculty aged 60 retiring prior to reaching their 66th birthday. The sample was reduced because some institutions were unable to report data on faculty age or reported no faculty members in the relevant age groups. Moreover, the data are for only one year and so may not represent long term trends.

Retirement probabilities do not differ using the 1980 mandatory retirement age in the public sector, but they do differ in the private group. However, if the pre-1978 mandatory retirement age is considered, probabilities of retirement are 10 percentage points higher with a 65 mandatory retirement age than with an older mandatory retirement age in both public and private institutions. There is no correlation between probability of retiring and a current mandatory retirement age of 65. However, the correlation between the probability of retiring and a variable which attempts to capture the relationship between a mandatory retirement age and employment extension policies is significant.

Consistent with the findings of other studies, we found that the change in present value or the change in annual annuity amount (highly correlated variables whose separate effects cannot be distinguished) had a significant effect while the absolute values of these variables did not.

Two alterations in the regression, however, casts some doubt on the conclusion that the mandatory retirement age is not important. When interaction terms that capture the interaction between mandatory retirement age and extension policies are included, the simple mandatory retirement age variable as well as the interaction terms seem to have a significant influence. This indicates that a variable for the formal mandatory retirement age alone does not capture the effect on retirement of policies that limit the ability of workers to continue work.

We substituted for the current mandatory retirement age the institution's mandatory retirement age prior to 1978. This variable has a significant and positive effect on retirement probabilities (Persons facing an age 65 mandatory retirement limit were more likely to leave employment than those not facing this constraint). We conclude that retirement plans were made by faculty members retiring in 1979 based on the mandatory retirement age in effect at the time these plans were finalized. A change in mandatory retirement just prior to their expected retirement date failed to change the plans of most faculty members. Thus, while the current often higher mandatory retirement age has little effect, the presence of a mandatory retirement age was a significant factor in the retirement planning of recent retirees, suggesting that the current mandatory retirement age will affect the retirement plans of faculty members now making retirement preparations. In conclusion, our findings suggest that mandatory retirement policies limiting the ability of faculty members to continue working past some age and directly influences retirement plans.

4. Preliminary Faculty Survey Results

a. Attitudes Toward the Exemption and to Mandatory Retirement Age

The attitudes of faculty members, referred to earlier, are of key importance in making any decision about continuing the present exemption for tenured faculty members to the minimum mandatory retirement age of 70. Accordingly, we attempted to ascertain the extent to which faculty members favor continuation of the age 65 exemption. Overall, 70 percent of all faculty respondents indicated that they "oppose" or "strongly oppose" continuation of the exemption. The responses did not differ substantially by type (two-year, four-year, university) or control (private, public) of institution.

We also asked faculty about their attitudes toward removing altogether the minimum mandatory retirement age. For the entire sample, 60 percent of all respondents "favor" or "strongly favor" complete elimination of mandatory retirement ages for faculty members. Faculty members at two-year institutions were most supportive of uncapping; faculty members at universities were least supportive of eliminating the mandatory retirement age.

In contrast we find that about one fifth of all faculty members "favor" or "strongly favor" continuation of the age sixty-five exemption, but there is no evidence of differences among faculty members at different types of institutions. With respect to elimination of the mandatory retirement age, we find that almost a quarter of all faculty members oppose this change, with faculty members from universities registering the strongest opposition.

b. Expected Age of Retirement

About 90 percent of all respondents provided an expected age of retirement. Ten percent have no idea as to when they will retire and 5 percent say they will never retire. Only two percent expect to retire before age 60, 24 percent plan to leave by age 62, and another 5 percent expect to retire before age 65. Then there is a big increase, with the 26 percent expecting to retire at age 65, 5 percent in the next two years, and another 35 percent from age 68-70. About three percent plan to retire after age 71. The several critical ages come at 62 when eligibility for Ssclal Security first occurs, at 65 which is the normal age of retirement, and at age 70 which is the present mandatory retirement age for many faculty members.

c. Changes in the Expected Age of Retirement

Almost 30 percent of the respondents indicated that they had changed their expected age of retirement over the past several years. Of this total 66 percent delayed their retirement age, 29 percent accelerated their expected retirement age, and 5 percent changed it only marginally. Among those who now expect to retire at ages 66-67, for example, most of them pushed back their expected age from 65. This change may represent a response to the shift in the age of mandatory retirement. Among those now expecting to retire at age 65, over half earlier planned to retire before age 65. Among those who now plan to retire at age 68-70, two-thirds had earlier planned to retire at age 65.

Based on these results it is difficult to attribute to passage of the ADEA Amendments the changes in expected retirement ages. It is possible that many people change their age of retirement over any several year period; there is no simple method for isolating the separate influence of the legal mandatory retirement age change.

Likely Responses to Early Retirement Inducements

The first question asked about the likelihood that faculty members would retire earlier if their pension benefits were not reduced because they retire early. Typically, there is some reduction in pension benefits for those who retire before the normal retirement age, thereby acting as a disincentive to retire early. One quarter of all respondents indicated they would certainly retire earlier if there were no penalty attached to this choice. Another 30 percent said they would "possibly" retire earlier were there no penalties. Thus, almost 60 percent of the respondents indicated that this kind of inducement could cause them to retire earlier. However, forty-two percent indicated they would not retire earlier even with such an inducement. With increasing age we observe a sharp decline in interest.

The second question was whether individuals might retire earlier if their pension benefits were adjusted upward for changes in the cost of living even though the recipient would suffer from the reduction resulting from early retirement. Just over 20 percent of the respondents said they would retire earlier were such an option available to them. Over 34 percent said they might possibly accept this option and the remainder were not interested or not sure. These results are quite similar to those for the previous question and suggest again that early retirement inducements could perhaps produce substantial responses on the part of faculty members.

Response to Inflation

The extent of recent inflation and its devastating impact on people with fixed incomes prompted us to inquire how people thought they would react to different rates of inflation. At the time of our survey the inflation rate hovered at the 12-15 percent rate, having risen progressively over the past decade. So we wanted to know whether higher rates of inflation would cause respondents to accelerate or delay their expected age of retirement.

We first asked whether continuation of the current rate of 12-15 percent would cause them to delay retirement. One-third of the respondents indicated they "strongly agree" that they would delay retirement if these rates continued. Another one-third indicated they agreed with the statement. Only 15 percent voiced disagreement, while the remaining 21 percent indicated uncertainty. This distribution of responses suggests that there is substantial uncertainty about inflation and what it will do to the well-being of faculty members.

We also asked whether a reduction in the inflation rate to the 7-10 percent range might cause people to retire earlier. Only 17 percent of the respondents agreed or strongly agreed with this statement. Fifty percent disagreed and 32 percent were uncertain. In short, a reduction in the inflation rate much below current levels seems unlikely to produce much change.

In summary, inflation has already affected the attitudes of faculty members about their expected age of retirement. A majority, it appears, are likely to delay retirement so as to minimize the rate at which the real value of their retirement benefits will decline.

Section 1. *INTRODUCTION*

This is an interim report on findings and recommendations concerning the impact on higher education of the expiration of the exemption granted by Congress to tenured college faculty members from the mandatory retirement age provisions of the 1978 Amendments to the Age Discrimination in Employment Act of 1967. These amendments changed the minimum age at which workers could be mandatorily retired for reasons of age alone from 65 to 70. This temporary exemption for faculty members continues until July 1, 1982 when the minimum age of mandatory retirement will be raised to 70, unless Congress extends or makes permanent the current exemption.

The results presented in this report highlight some of the results of two surveys, one of institutions of higher education and the other of faculty members at those same institutions. Descriptive statistics from these surveys are presented, along with some highly preliminary analytic and simulation results. The analytic and simulation results are tentative and subject to revisions.

The call for this study by Congress reflected its difficulty in reaching a judgment about the appropriate minimum age at which educational institutions could uniformly require tenured faculty members to retire. A compromise was reached that provided a temporary four-year exemption for tenured faculty members during which time institutions would be able to adjust their policies to the new legislation. Meanwhile, the effects of a permanent mandatory retirement age change to age 70 or higher could be studied with the conclusions reported in sufficient time for Congress to decide what action if any it should take.

The Major Questions

The Congressional debate on the legislation, and especially the singling out of faculty members for this temporary exemption, raised a number of questions that guided the structuring of this study. Four major questions are given major attention:

- What are the origins and impact of longstanding mandatory retirement age policies in higher education?

- What are the attitudes of faculty members and administrators to retirement and to alternative policies with respect to the age of mandatory retirement?
- What are the likely direct (first-round) effects of different policies on mandatory retirement age?
- What are the likely adaptations by the higher education sector to the direct effects of these policy changes?

Approaching the Task

Several approaches are followed in attempting to answer these questions. First, we draw upon existing knowledge and data available in the general literature, special studies undertaken by higher education organizations, reports produced by individual educational institutions, and discussions with a variety of individuals in higher education. Second, we utilize the results of two specially designed surveys to obtain information from matched national samples of colleges and universities and of faculty members. Third, we attempt to develop and test several models of institutional and faculty behavior that highlight the role of key variables influencing decisions about the retirement policies of institutions and the retirement plans of individual faculty members.* Fourth, we utilize these and other results to simulate the effects over the next several decades of continuing the exemption versus allowing it to expire in 1982.* Finally, we present the results of case studies for a limited number of institutions, drawing on additional quantitative and qualitative information that illustrate the variety of experiences and adaptations among institutions and faculty members.*

The Evolving Context of the Study

On-going research indicated that the effects of a one-time change such as an upward shift of five years in the minimum retirement age, has an initial impact which gradually subsides with time. In other words, the duration of any significant adjustment effects is fairly short. Moreover, adaptations and adjustments by professors and institutions will further reduce the strength and duration of these effects. Second, it became apparent that the proportion of all college faculty members expected to be affected by the legislation was less than had been thought. Not only was the mandatory retirement age already set at age 70 in many institutions but the exemption appears to have been interpreted as not applying to college faculty members working under a contracts system rather than under a tenure system. And finally, many States moved rapidlyto change the minimum age of mandatory retirement to age 70 for all employees including tenured faculty members. Since employees in these States cannot take advantage of the exemption, the proportion of tenured faculty members who will be affected by the expiration of the exemption in 1982 has steadily declined.

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* To be included in final report

At the same time of assessing the impact of changes in the mandatory retirement age in the higher education sector may be more difficult than undertaking a similar analysis for other sectors of the economy. Many forces affect higher education, and uncertainties about the direction and strength of these forces creates major difficulties for the decade of the 1980s. Depending on the outcomes of these uncertain forces, their effects probably will swamp the impact of changes in the mandatory retirement age. Therefore, it is useful to describe the context within which the effects of this legislation will have to be observed during the 1980s.

One of the most obvious uncertainties concerns future enrollment levels. The numerous projections of enrollments for the decade of the 1980s give a mixed picture, with some experts projecting declines of as high as 50 percent and others indicating the possibilities for continued increases despite the declining size of the typical college-age group, age 18-22. The impact of these differences on faculty hiring and faculty size are quite obvious--there will be fewer openings for new faculty members, with the result that the faculties at most institutions will become older and the prospects for adjustments will be reduced.

A second uncertainty concerns the financial situation of institutions of higher education in the 1980s, resulting from continuing tight budgets for public institutions, resistance to tuition increases, and greater difficulties in obtaining gift income. This means that institutions will have less flexibility in designing programs to stimulate earlier retirement of faculty members.

Still another and related uncertainty stems from sharp increases in some of the costs faced by higher education, among them energy costs, mandated increases in Social Security contributions, etc. The cumulative effects of these changes will contribute to the financial crisis, making it more difficult to hire new faculty members, to retain older faculty members, and to finance programs to stimulate earlier retirement.

Finally, the combination of deteriorating faculty salaries which fell by almost 20 percent in real terms during the 1970s and of continuing inflation, will cause some faculty members to defer retirement while inducing others to seek more remunerative employment in other sectors of the economy. The net effect of these two opposing forces is difficult to predict but in either case the effects on the future of higher education will be serious.

These uncertainties create several difficulties in evaluation research of the kind we are doing. Most important, they make it difficult to pinpoint the impact of the change in the age of mandatory retirement because different combinations of these uncertainties will interact differently with the policy change. As a consequence, the projected effects of a change in the mandatory retirement age as reflected in simulations, depend critically on the assumptions made about these uncertainties. In addition, the magnitudes of these uncertainties are likely in the aggregate to dominate the effects of the mandatory retirement change.

Section 2. PROBLEMS AND PROSPECTS FACING HIGHER EDUCATION

In this section we outline the economic context within which higher education must adapt to a change in mandatory retirement age. A required change in the mandatory retirement age is just one of several critical problems with which higher education must deal during the next decades. The impact of a mandatory retirement age change will depend in part on the adjustments institutions and their faculty members made to these other problems. Thus, it is important that these other issue are understood, and considered when the likely effects of a change in the mandatory retirement age are examined.

A. Emerging Problems in the 1980s

Despite the existence of mandatory and normal retirement ages, a system of retirement benefits, and the institution of tenure, it is apparent that higher eduction will be subject to a number of unique and serious strains during the 1980s. These are likely to make its adjustment to the lapsing of the current exemption more difficult than would otherwise be the case. This section attempts to outline some of those strains.

(1) Probable Enrollment Changes in the 1980s and Beyond

The pattern of past and projected enrollment changes has been the subject of much public discussion and concern. Though many observers believe that enrollments have already begun to decline, this is clearly not the case. In fact, enrollments during the 1970s increased by about 25 percent. Enrollments increased in every sector of higher education, with the largest percentage increases occuring at the two-year colleges.

The prospects for the 1980s and the 1990s are less certain, and less optimistic. The numerous projections for the 1980s give a mixed picture. Some experts project enrollment declines of as high as 50 percent. The majority of experts predict modest overall increases in enrollments of less than 10 percent for the decade. The Department of Education predicts little or no change over the decade. Other experts are far more optimistic and they forecast continued vigorous growth in enrollments in the 1990s, as new clientele groups are tapped.

The projections for the year 2000 are similarly varied. Of course, the farther into the future one attempts to project enrollments, the larger will be the impact of particular assumptions embodied in the forecasts. The range of possibilities reflected by the projections is very large.

These disparities hinge critically on the growth of what are called non-traditional students -- those who fall outside the 18-21 age range, of typical undergraduate students. Whether nontraditional enrollments will continue to grow gives rise to a substantial part of the differences among the various projections.

The potential for enrollment growth from the traditional college age population is limited, due to prospective reductions in the size of the typical college-age population. The sharp reduction in births that began in the mid-1960s will bring delayed reductions in the size of the 18-year-old population from which the typical freshman comes. Whereas the number of 18 year-olds was 4.2 million in 1980, that number will drop to about 3.4 million in 1990 and to a low hovering at about 3.2 million through the mid-1990s. After that, the number will depend upon future birth rates. Much depends upon what fraction of each cohort graduates from high school and then continues on to and completes college. Whether and by how much the expected smaller cohorts of the late 1980s and early 1990s, resulting from the smaller cohorts of young people available for immediate employment then, will affect college attendance rates is not clear.

The likelihood that larger proportions of nontraditional students will enroll is also uncertain. No doubt recent increases in enrollments among these students reflect in part the desire of many women to either complete their education or acquire additional training that will permit them to enter the labor force and acquire satisfactory employment. The increase in demand from older students also reflects the need for continuing training and retraining on the part of a labor force living in a period of technological and other changes that continually affect the nature and composition of the demand for labor.

Despite the uncertainties, it is prudent to work with the official Department of Education projections that show little or no change in higher education enrollments for the 1980s.

Whatever happens to the overall pattern of enrollment change, certain types of institutions, namely the selective but also the less selective, 4-year liberal arts colleges, will continue to be heavily dependent on the traditional college student population for their enrollments. Such institutions may very well face enrollment declines, especially if they are located away from large population centers. In the absence of changes, it seems apparent that many of them will suffer enrollment declines as the competition for traditional students intensifies over the next decade. This will force drastic reductions in the rate at which new faculty are hired and may even require layoffs.

The import of prospective enrollment declines should be clear. In an era of growth, whether strong or slight, it will be easier to accomodate the expiration of the mandatory retirement age exemption because institutions can adjust their rate of hiring of new young faculty members. If no enrollment growth is likely, this will force more substantial reductions in new hires until a new stable pattern of retirements emerges. Finally, if enrollments actually decline, the demand for new faculty will have to drop drastically; indeed, some layoffs of already-employed faculty may be required to accomodate these enrollment declines.

(2) Aging of Faculty Members

The aging of faculty members is inevitable, given the extensive hiring of new faculty members to staff the enormous expansion of higher education in the 1960s, the slower growth of the early 1970s, and the minimal growth projected for the 1980s. The impact of this aging is less clear. Obviously, larger proportions of faculty members are older. It is unclear however whether larger proportions of them will decide to retire early or to continue teaching until they are "forced" to retire.

Changes in the age distribution of faculty members can be shown with the help of data from various surveys. The median age of faculty members fell from 43 in 1962-63 to about 40 in 1968-69, rising to 43 by 1972-73, and then holding at about that level in 1975 and 1977. Another view of the distribution is provided by the percentage of faculty members over age 55. The percentage over age 55 fell from 16 in 1962-63 to 14 percent in 1968-69, rising again to 16 percent by 1972-73. Comparable data for more recent years are not available but those data that are available suggest little change over the 1975-1977 period.

How does all of this bear on the mandatory retirement exemption? If the exemption lapses and the mandatory retirement age rises from 65 to 70, over time increasingly larger proportions of faculty members will have the opportunity to continue teaching. The larger the proportion of older faculty members, the more difficult will be the adjustment.

3. Tight Financial Situation

Throughout most of the 1970s the resources available to support higher education have been relatively more limited than they were in the 1960s. Moreover, the prospects for the 1980s look no better as the pressures to restrain the growth of government expenditures expand and take effect. Because the public higher education budget is such a substantial portion of most State budgets, it offers a convenient target for restricting or cutting. Recent sharp increases in the cost of fuel and supplies place further financial limitations on most institutions. The growth of regulations and the need to implement mandated changes further strain tight budgets. And finally, the difficulties of raising other funds to support higher education, including the raising of tuition, hardly need elaboration.

The tightened financial situation for higher education obviously will reduce its ability to adapt to changes of any kind, and in particular to changes in the age of mandatory retirement. Given that professors nearing retirement are generally paid about twice the salaries of newly entering faculty members, the decision by any substantial number of faculty members to continue teaching until age 70, or beyond if that is permitted, will raise the costs of total compensation. Thus, there is a direct link between the overall financial situation and the ability of the institutions to cope with potential adverse effects resulting from the chjange in the age of mandatory retirement.

4. The Impact of Inflation

The future of higher education is also clouded by uncertainties about the prospective rate of inflation. While the unprecedented price level increases of the late 1970s and early 1980s may be coming under more effective control, it seems unlikely that the inflation rate will drop substantially in the near future. The inflation rate is almost certain to affect faculty decisions about retirement.

There are two reasons for this. First, the real salaries of faculty members after adjustment for the effects of inflation have declined by between 15 and 20 percent over the past decade. This contrasts with the experience of most occupational groups which either maintained their real income or registered slight gains. The declining real income position of faculty members means that they have been able to save less, will have fewer resources available to supplement their retirement benefits and as a result will want to continue working as long as they can so as to begin their retirement in a more advantaged situation.

The prospects for any substantial betterment in the real income position of faculty members in the 1980s also is quite unlikely. One reason is that higher education as a whole will face stringent budgets and therefore will be unable to offer substantial salary increases to faculty members. To the extent that the real income position of faculty members further deteriorates, their incentives to continue teaching will increase.

Closely related is the decline in the real value of retirement benefits expected by many faculty members. For faculty members who belong to TIAA-CREF (most of them are in private institutions), the return on investments in the late 1960s ans 1970s was less than had been anticipated. This has led to some erosion in retirement benefits relative to those for people in other nonacademic sectors. For most faculty members in the public sector retirement benefits have also been adversely affected because of falling real salaries to which retirement benefits are tied. Even in the most favorable case, the incentives not to retire are strong. Faculty members retiring in 1980 will, because of real salary declines, receive pension benefits almost 20 percent less than other occupational groups, most of whose salary increases kept up with the cost of living. For a faculty member who retired with full benefits in 1975, however, the real value of these benefits would have declined by almost 40 percent by 1980, only five years later. This is based on an average 8.7 percent annual inflation rate. Had the inflation rate been higher, the real decline would have been even greater. Declines of this kind are likely to cause faculty members to want to continue teaching in hopes of building up their retirement benefits to acceptable levels. The perceptions of continued future inflation are also expected to affect retirement plans. Inasmuch as retirement benefits are usually fixed in value at the time of retirement, future inflation reduces the real value of these benefits. There is no effective way to deal with this problem except to continue teaching as long as possible, in hopes of minimizing reductions in real living standards after retirement.

It appears, then, that the impact of inflation on salaries and retirement benefits has been substantial, is likely to continue at about the same pace, and will in all probability lead to a deferral of the age of retirement for faculty members. Any raising of the minimum mandatory age, therefore, is likely to permit and encourage a potentially substantial number of faculty members to continue teaching.

B. Health and Expected Retired Life of Faculty Members

Faculty members are a long-lived group. The reasons for the greater longevity of faculty members, relative to the general population may not be well understood, but the lesser physical demands of the job, low accident rates, better knowledge about health maintenance, and more ample financial resources to provide health care all contribute to extend the lives of faculty members well beyond that of the average person. This means that faculty members as a group have the potential to continue working longer than most other occupational groups. Good health alone would seem to cause the proportion of faculty members opting to continue teaching into their advancing years to greatly exceed that for the majority of occupational groups.

Two kinds of evidence are indicative of the health of college faculty members.

First, self-reported assessments of the health of faculty members indicate that they are relatively healthy group. One study indicates that 89 percent of faculty members age 61 and over describe their health as "excellent" or "good." Among those aged 55-60, 90 percent describe their health in similar fashion. If we equate those in the general population who reported their health status as "worse" with faculty members who reported their health status as "fair" or "poor," then clearly faculty members are much healthier than the general population. Second, the death rate of older faculty members as well as the expectation of life of older faculty members are considerably lower and higher, respectively, than for the general population. From age 60 onwards the death rates are only about one-half as high as for the general population. The expectation of life is from 25 to 40 percent longer over these same age groups. Thus a faculty member retiring at 60 can expect to live for 21 years, compared to the 16 years for males in the general population. At age 70 factuly members can expect to live over 14 years as compared to less than 11 for the rest of the population.

This evidence implies that faculty members are much more able to continue their teaching and other professional work than is true of other workers.

C. Trend Toward Earlier Retirement by Faculty Members

Despite forces that would seem to cause faculty members to delay retirement, there seems to be widepsread agreement that faculty members have been retiring earlier each year. This trend toward earlier retirement is a general phenomenon that has characterized the male work force over the past several decades. It is generally believed that the improvement of pension programs, the expansion of Social Security and its options for early (pre-age 65) benefits, along with a desire to engage in other kinds of nonwork activities after retirement, have all contributed to this change. Much the same appears to be true for faculty members.

The evidence on the extent to which faculty members are retiring earlier is not airtight. The most comprehensive evidence comes from TIAA-CREF which compiles data each year on the starting ages for its immediate annuity contracts from its members. These data indicate that in 1967 less than 16 percent of its contracts began below age 65. By 1976 that percentage had increased to just over 32 percent. The most recent data for 1979 show a further rise to 39 percent, reflecting an accelerating trend upward. Unfortunately, the TIAA-CREF data include not only faculty members but also other staff and still other individuals who earlier worked in higher education and are now drawing benefits. Though some of these annuitants might be staff members of colleges and universities, officials in private nonprofit foundations, and so on, the vast majority will be faculty members. This means that the data are at least roughly indicative of the trend toward early retirement.

This trend toward earlier retirement of college and university faculty members had been expected to continue into the foreseeable future at least as of several years ago. Now, however, there is much less certainty about these projected trends. Some of the reasons for these uncertainties are taken up in subsequent sections of this report.

D. Hypotheses About the Impact of Lifting the Mandatory Retirement Exemption

What are our expectations about the impact of permitting faculty members to retire at later ages than is now possible? To what extent will raising the minimum mandatory retirement age from 65 to 70 cause individuals at to continue to teach? What proportion of them are likely to continue beyond the age at which they might otherwise have expected to retire? What are the consequences of a resulting widespread delay in the age of retirement?

We list here a number of different hypotheses about the effects of raising the mandatory retirement age from 65 to 70. This list is not necessarily exhaustive. Rather it is repsonsive to the concerns expressed in the debate about this legislation in Congress.

We divide this list into three parts. The first concerns the impact on the continuance of vfaculty beyond the former age of retirement. The second explores the duration of this impact, that is, the number of years over which this impact will be felt. The third section looks at the distribution of this impact across different kinds of colleges and universities and across different kinds of faculty members.

1. Impact on Continuance of Faculty to Later Retirement Age

Compensation costs of colleges would rise. This will occur because typically faculty members approaching retirement age (age 65) receive salaries that are roughly double those of newly hired faculty members. The amount of increase in compensation costs will depend on the proportion of the faculty who opt to continue beyond the age at which they would otherwise retire and on the average length of their extension. This increase would put pressures on institutions to seek out other methods of adjustment, including reducing the size of the faculty through attrition, changing the student-faculty ratio, altering the program mix, and raising more revenue.

Colleges and universities will be more limited in their ability to hire young, newly-trained PhDs. To the extent that substantial numbers of faculty members remain rather than retire, the opportunities for bringing in new faculty members are diminished. The long range consequences of this are important if for no other reason than that they produce future imbalances in the age structure of faculties.

Greater difficulties would be encountered in meeting the goals of affirmative action. The more limited number of new positions will make it more difficult to hire additional women and members of minority groups. To the extent that large proportions of the available slots are allocated for the hiring of women and members of minority groups, this will prove detrimental to men and to majority groups, who traditionally have suplied the bulk of future PhD recipients. In either case, some highly qualified new PhDs who are not in these favored groups will be passed over in the hiring process.

Tenure granting policies and tenure itself will come under closer scrutiny. As older faculty members opt to continue teaching, the average duration of time during which individuals hold tenure could increase by up to five years. When combined with the reduction in the number of new hires, there would eventually be a permanent increase in "tenure density," the proportion of the faculty protected by tenure. This means that insititutions will have less flexibility in adjusting faculty size downward if substantial enrollment declines occur. This will require institutions to rethink their tenure policy, forcing them to be more selective in deciding who is to be granted tenure so as to hold down their tenure density.

Pressures will mount to find ways of dealing with faculty members whose performance is impaired by age. To make assessments in an even-handed way, it may be necessary to establish an evaluation system that requires eveluating the performance of all faculty members. This will entail costs in time and effort on the part of institutions and their faculty members, since faculty members will have to be involved in these evaluation procedures.

Efforts will intensify to devise programs to stimulate the earlier retirement of faculty members and to target these policies on those faculty members whose performance levels show the greatest decline with advancing age. The need for such programs has already been felt at many colleges and universities, including those with relatively early mandatory retirement ages of 65. This development is prompted by a concern with rising tenure densities and the need for more new younger faculty members in an age when knowledge is rapidly expanding and changing. Since such programs are not costless, institutions will have to divert some of their limited resources to enhancing their effectiveness through early retirement programs.

2. Duration of Impact

The duration of the impact of a change in the age of mandatory retirement will be fairly short-lived. If, for example, there is a change in the age of mandatory retirement from 65 to 70, and if substantial numbers of faculty decide to continue teaching until age 70, then total budgetary costs will rise. This occurs because older faculty members typically receive salaries that are about twice those of new young PhDs who otherwise would be hired. As each new cohort of faculty members reaches age 65 and opts to continue, costs will continue increasing steadily. This will continue for five years when the first cohort that could extend reaches age 70 and must retire. After that there will be no further increases in compensation costs because of this one-time change. At the same time additional numbers of younger people can now be hired to replace the older faculty members who are retiring. Thus, the transitional period will have ended and no further changes will result from the change in the mandatory retirement age by itself. It is important to indicate clearly that these are one-time effects and will not lead to an ever escalating rise in compensation costs. Of course, anything that changes the age structure of the faculty will have subsequent long-run effects.

3. Distribution of Impact

Distribution of the impact of a change in the age of mandatory retirement will vary among different kinds of colleges and universities and also among different kinds of faculty members. For example, colleges which have relatively young faculty will experience almost no effect, whereas long-established colleges that experienced rapid growth, say immediately after World War II, will probably be more severaly affected. It is also worth noting that many colleges and universities have long had mandatory retirement ages of 70 and hence are not subject to the effects of the change. Moreover, a number of institutions have changed their age of mandatory retirement since, or in anticipation of, the 1978 amendments. Whatever the age structure, smaller colleges will be more hard pressed to adjust than will larger institutions. The problem arises because small colleges have small departments of perhaps two to four faculty members. To the extent that one person continues teaching for another five years, that department's opportunities to acquire new faculty will be much more greatly limited than were one more individual to continue teaching in a larger department.

There will also be differential effects for different kinds of faculty. Women and minority faculty members will be almost immune to this change simply because there are so few of them and even fewer of them are in the affected age group of 65 to 70. Those faculty whose performance is high and who want to continue will obviously now be able to do so. Those faculty members whose performance is weak and who may really want to retire will no longer be forced out but must now make a conscious decision to retire at some age before 70.

To sum up, the distribution of the impact of the change in the age of mandatory retirement from 65 to 70 will vary considerably across institutions and among different kinds of faculty members. This makes it difficult to generalize about the effects of the change. It also suggests that some institutions and faculty members may be considerably hurt by this change while others may be virtually unaffected, at least in the short run. All of this makes the analysis more difficult because whatever general trends and patterns are found, there are bound to be exceptions that will have to be dealt with in special ways.

Section 3 Background to Survey Research

A. Evolution of Mandatory Retirement and Pension Practices

The evolution of mandatory retirement in higher education is closely connected to the history of pension plans. This discussion focuses on the two types of pension plans, namely State public plans and TIAA-CREF, that cover over 90 percent of all faculty in our survey.

A major step in pension coverage of college teachers was made with the creation in 1905 of the Carnegie Foundation for the Advancement of Teaching (CFAT), endowed with an intital grant of 10 million dollars from Andrew Carnegie. This provided the basis for an entirely new system of professorial pensions. Initial coverage of CFAT pensions was limited to selected private institutions. Petitions for membership from state universities and land grant colleges were turned aside, marking perhaps the beginning of the separate coverage of state and private institutions by different types of plans. The foundation did reverse itself in 1908 and made provisions for state universities to be considered for membership on a case by case basis.

In the first year, 1909, five state tax supported institutions were admitted to membership while three more were allowed in the following year. But after the admission of the University of Virginia in 1911, CFAT closed its doors to state institutions.

During the decades of the 1920s and the 1930s, state legislators began to seriously to face up to providing old age security for school teachers and college professors. Between 1923 and 1933, twenty state legislatures enacted pension laws of one kind or another. While some of these were later invalidated through gubernatorial veto or state action, by 1932 approximately 100,000 educators were receiving old age security.

In 1918 the Carnegie Foundation for the Advancement of Teaching launched the Teachers Insurance and Annuity Association, a retirement fund based on strict insurance principles offering a contractual joint contributory plan to member institutions. Private institutions joined TIAA in overwhelming numbers. In States where the legislature was slow to act in establishing a pension plan just for public shcool teahers a number of public colleges and universities elected to join the Teachers Insurance and Annuity Association.

This movement toward state old age pension systems and the attractiveness of participation in the TIAA-CREF was given added force by the decision of Congress not to include under the original Social Security Act of 1935 State or local employees or the employees of "religious, educational, or scientific institutions." This restriction on coverage was maintained for some years; private colleges were not permitted to join Social Security until 1951 and public collegs and universities not until 1954.

By 1950 the early phase of faculty retirement plans was drawing to a close. In a 1948 survey by TIAA it was reported that 85 percent of college and university teachers were covered by a retirement plan of some sort. Only 15 percent were in institutions with no plan or from which no information was forthcoming regarding retirement. Of all teachers, 46 percent were in institution scovered by TIAA, 22 percent were covered by publicly administered plans and 16 percent were covered by a variety of agency life insurance plans, self-funded plans, religious plans, and so forth.

In the absence of a pension plan, forced retirement was unthinkable since few professors had savings or private annuities adequate for their retirement needs. Forced retirement would have meant penury and destitution for many. Consequently in the absence of a pension system, State lawmakers in public higher educational institutions as well as their private counterparts frequently allowed faculty members to serve indefinitely.

The establishment of pension funds covering both public and private college professors was accompanied by regulations at many institutions requiring the retirement of faculty at particular ages. A 1936 survey focusing mainly on state funded institutions shows that by that date a mandatory retirement age was a customary part of these plans although there was some variation across plans in the mandatory retirement age and in extension policies.

The acceptability of a mandatory retirement age in both public and private institutions is indicated by a 1950 joint statement made by the American Association of University Professors (AAUP) and the Association of American Colleges (AAC) entitled "Academic Retirement and Related Subjects". The Committee came down emphatically on the side of setting a mandatory retirement age. Recommending that

> " the retirement age be fixed, that exceptions rarely if ever made to prolong service beyond this fixed age, and that exceptions requiring earlier retirement should be on recommendation of a committee of faculty and administration...if there is a fixed retirement age it should be between 65 and 70 inclusive. The committee believes that...65 is too early for a compulsory retirement age but it should not be later than 70."

Elaborating on the point, the authors admitted that ease of administration had entered into the committee's thinking; however, they insisted that the essential rationale was not administrative convenience but justice and fairness to the retiring professor.

It is of considerable interest that the joint committee gave its assent to a range of ages, 65 to 70, within which the "fixed age" was to be set. In so doing it reflected an uncertainty that had prevailed for some years regrading the "best" age. President Alexander G. Reuthven remarked that "it is now recognized" that the period of service "should end somewhere between age sixty-five and seventy." As noted above, there had been a tendency for the early State pension systems and the early institutions joining TIAA to adopt 70 as the maximum age limit. However, as the pension movement expanded in the 1940s and 1950s to include non-research-oriented institutions that were predominantly committed to teaching, and where heavy teaching loads were the norm, the pendulum swung somewhat toward the lower, age 65, standard. In response to varying pressures, the trend over the years flowed back and forth within this five year range. Some institutions selected age 70 as their mandatory age and found it workable, others set no mandatory age whatever, and still others (actually the majority) set a mandatory age between 65 and 68. This lack of complete consensus probably seemed of little moment at the time, but it appears to have conditioned higher education's response in 1977 when the ADEA amendments were *under discussion. At the time the question arose,* higher education had to confront the difficulty that no substantial agreement existed, or had ever existed, within higher education as to the "most appropriate" mandatory retirement age..

Despite the strong statement by the American Association of University Professors-American Association of Colleges (AAUP-AAC) advocating a fixed retirement age, large numbers of institutions continued to disregard this recommendation. In 1969 TIAA published the results of a survey of college and university retirement systems similar to the one discussed above conducted two decades earlier. It revealed that whereas 786 of the surveyed institutions stated an age of retirement with extensions of service permitted, only 98 set a fixed retirement age with no exceptions. Fully 62 percent of all institutions--by far the largest category--fixed 65 as the normal retirement age with extensions of service allowed to some specified maximum usually 70.

A few years after the 1950 joint statement, the official position on the desirability of a fixed retirement age without exception was revised. In 1968 the chairman of the AAUP Committee on Academic Freedom pointed out in a report for the committee, that forced retirement at an inflexible preset age might not always be congruent with professors' best interests. A year later (1969) a shift in doctrine was made official as a joint committee of AAUP and AAC, similar in its composition to the 1950 committees, discussed earlier, issued a report in which the fixed age and flexible age systems were both referred to as being acceptable and neither was termed as intrinsically superior. The committee insisted, however, that decisions regarding the year to year extensions under a flexible arrangement "should be made upon recommendation of faculty and administration" and not by the administration acting alone. Also it was reaffirmed that in no case should retirement occur after the attainment of age 70.

Thus, the reevaluation by the higher education community resulted in the greater acceptance of a discretionary retirement age between 65 and 70, but it included the reaffirmation that a mandatory retirement age no later than age 70 is desirable.

The development of pensions, and associated mandatory retirement policies in higher education reflects the public-private division of this sector. Public institutions covered by State pension plans have historically had a later mandatory retirement age than have private institutions. This division limited the ability of higher education to agree on a united policy in reacting to the 1978 ADEA amendments. This division has also meant that an important group of institutions has adhered more closely to State public policies than to AAUP guidelines.

B. The Meaning and Evolution of Academic Tenure

> Nothing in this act whall be construed to prohibit compulsory retirement of any employee who has attained 65 years of age but not 70 years of age, and who is serving under a contract of unlimited tenure (or similar arrangement providing for unlimited tenure) at an institution of higher education as defined by section 1201(a) of the Higher Education Act of 1965.
>
> --Section 12(d) of the PL 95-256,
> the ADEA Amendments of 1978

The absence of expressed Congressional understanding of tenure was largely made up for later in the process of issuance of administrative regulations pursuant to the statute. In preparing the regulations, issued November 1979, the responsible enforcement agency, the Equal Employment Opportunity Commission (EEOC), consulted with the American Association of University Professors (AAUP), a group with expertise in this field. The definition of tenure, consists largely of direct quotations from relevant sections of the AAUP/AAC 1940 "Statement of Principles on Academic Freedom and Tenure." In so doing, the regulations dispense with the adjective "unlimited" as a qualifying term, and instead talk of "tenure plan," "tenure arrangements," or simply "tenure." The regulations evidence an understanding of the great diversity of tenure plans in effect at various institutions. Rather than allow an institution to claim automatic exemption under the Act simply becaue of a nominal adherence to a "tenure" system, the regulations stipulate that "the burden is on the one seeking to invoke the exemption to show that every element has been clearly and unmistakably met" (Federal Register, 44:226 (November 21, 1979), para. 1625.11, sec.b). At a later point the same issue is dealt with in more detail:

> ...a tenure arrangement will not be deemed inadequate solely because it fails to meet these (AAUP-approved) standards in every respect. For example, a tenure plan will not be deemed inadequate solely because it includes a probationary period somewhat longer than seven years. Of course, the greater the deviation from the standards of the 1940 Statement of Principles, the less likely it is that the employee in question will be deemed subject to "unlimited tenure" within the meaning of the exemption. Whether or not a tenure arrangement is adequate to satisfy the requirement of the exemption must be determined on the basis of the facts of each case (ibid., sec (e)(d), emphasis added).

In sum, the regulations achieve sophistication with respect to the complexity of tenure.

The proportion of faculty members with tenure is of interest, for it sets a limit on the extent to which the exemption applies. Highly comprehensive data covering all categories of institutions (university, four-year institutional units, two-year units, "tenure" as well as "nontenure") are available from the National Center for Educational Statistics (NCES), a Federal agency. In its most recent study, NCES reports that out of a total of roughly 396,000 full-time faculty members in 1978-79, 222,000 or 56.0 percent were tenured, the proportion of tenured having climbed from the 1974-75 figure of 53.6 percent (NCES prepublication data from HEGIS, "Salaries, Tenure and Fringe Benefits of Full-Time Institutional Faculty, 1978-79," National Center for Educational Statistics.)

C. Changes in State Legislation Since the Passage of the AADEA

The effect of the expiration of the tenured faculty provided by the 1978 Amendments to the Age Discrimination in Employment Act (ADEA) and of subsequent legislative action that may be taken by the U. S. Congress concerning the mandatory retirement of tenured faculty members will be determined in part by whether broader laws, preempting federal law, have been passed by the various states.[1] This section examines state statutes, as of January 1, 1980, pertaining to the mandatory retirement of tenured faculty members in institutions of higher education. In most states faculty members are not specified in labor codes restricting the ability of employers to retire employees on the basis of age alone. In a few, however, including California where mandatory retirement at any age is outlawed for all other employees, the retirement of tenured faculty members is permitted at certain ages. Our focus is on how changes in Federal law have and will change the legal constraints institutions face in setting mandatory retirement policies pertaining to tenured faculty members.[2]

The passage of the 1978 Amendments to the ADEA placed additional constraints on the ability of higher education institutions to set mandatory retirement policies for their tenured faculty in States that up to the effective date of the act (1) had no legislation barring age discrimination in the discharge if employees, (2) required mandatory retirement prior to age 65 for tenured faculty members, (3) had legislation on mandatory retirement that covered only private or public employees, or (4) had a bona fide occupational exemption (BFOE) retirement plan permitting retiring employees on the basis of age.[3] Institutions in states in which the pre-1978 upper age limit was less than 70 would also find their legal ability to set a mandatory retirement age for other employees altered by the ADEA.[4] However, the discussion here deals only with the legal constraints on mandatory retirement policies of tenured faculty members.

We can for the most part ignore the second and fourth prints above. Prior to 1978 virtually all institutions of higher education had a mandatory retirement age set at 65 or older. And although the 1967 ADEA permitted mandatory retirement at an age earlier than 65 in order "to observe the terms of a bona fide seniority system or pension or insurance plan,"[5] we know that few institutions of higher education took advantage of this exception. This means that we are largely concerned with whether the ADEA Amendments preempted then relevant State codes, the subsequent adjustments in state statutes, and the effect of possible future changes in Federal law against age discrimination on the legal ability of institutions of higher education to freely set a mandatory retirement age for their tenured faculty members.

Effect of 1978 ADEA Amendments

Prior to 1978, all States specifying an upper age limit for the age group over which personnel decisions on the basis of age were restricted, had set this maximum at an age no greater than 65. In states where no upper age was given to the protected age group, all but two (Alaska and Montana) permitted mandatory retirement of tenured faculty in higher education under a general BFRP (bona fide retirement plan) exemption or under a specific exemption to higher education. Thus whether or not an institution was in a state with legislation restricting age-based retirement decisions prior to 1978, in all but two states it was legal under both federal (the 1967 ADEA) and state statutes to have an age-based mandatory retirement policy at age 65 or older.

To sum up, the ADEA Amendments markedly changed the minimum conditions under which employers in virtually all states could set a mandatory retirement age for employees. Academic institutions of higher education were given a temporary reprieve in that mandatory retirement of faculty between ages 65 and 70 would continue to be permitted under the ADEA Amendments until July 1, 1982. After this date tenured faculty could not be mandatorily retired for reason of age alone prior to age 70. By raising the maximum age for the protected age group to 70 and by eliminating the bona fide retirement plan exemption of the 1967 ADEA, the ADEA Amendments assured that most state laws in effect in 1978 would be preempted by the Federal amendments. During the next two years (1978 and 1979) 18 states adopted or amended statutes, in most cases bringing them into conformity with the ADEA Amendments. These changes at the state level determined the ability of institutions within the state to take advantage of the ADEA Amendments' tenured faculty exemption, to maintain age 70 mandatory retirement now and upon the expiration of the exemption, and to determine the impact of possible future changes in Federal law (e.g., the uncapping of the age limit) on the legality of mandatory retirement policies for tenured faculty within individual states.

Post-1978 Amendments at the State Level

Of the 13 states that prior to 1978 had no upper age limit on age discrimination, but allowed the mandatory retirement age as part of a bona fide retirement plan[16] six adopted no amendments in state statues during the next two years (Florida, Hawaii, Maryland, Michigan, Nevada, New Mexico). In these states mandatory retirement of tenured faculty members could continue beyond 65 under the temporary federal exemption and the State bona fide retirement plan ememption (BFRPE). After July 1, 1982, a mandatory retirement age of 70 for tenured faculty would be allowed under the state BFRPE, and the Federal capped age group. Among the seven states that altered State legislation, only Maine specifically banned mandatory retirement at any age for all employees.

The remaining states in this group (i.e., those with pre-1978 BFRPE exemptions but no upper age limit and who changed their statutes) adopted changes that would both permit institutions of higher education to take advantage of the temporary faculty exemption of the ADEA Amendments and cause future changes in the Federally protecta age group to directly affect the ability of institutions within these states to establish minimum mandatory retirement ages for tenured faculty members.

Thus, in this first group of 13 states the ability of higher education institutions to establish mandatory retirement policies would be controlled by the ADEA Amendments and by future amendments at the Federal level in those 6 states that did not specifically alter their prior BFRPE.

In the second group of states, those 9 states with an age limit less than 65 prior to 1978, [17] the same pattern occurs--very few adopted changes that both preempted the 1978 ADEA Amendments and assured that future admendments in the ADEA would not affect the legal environment facing higher education. This distinction falls only on Utah which raised its protected group from 40-65 to all persons 40 or older. Four states (Kentucky, Colorado, West Virginia and Georgia)[18] adopted no changes, thus having their state laws preempted by the broader ADEA Amendments. New Hampshire specifically prohibited mandatory retirement, but allowed an exemption for non-profit, private educational associations. The amendment to Rhode Island's Fair Employment Act to include age discrimination specified a 40-70 protected age group but included a BFRP exemption. In Ohio and South Dakota, the latter protecting public employees only, the protected age group was raised to 70 for all employees, preempting the ADEA faculty exemption, but allowing room for Federal influence if the protected age group were broadened at the Federal level. Thus, in this group only Utah adopted legislation that excludes the exercise of the ADEA faculty exemption by educational institutions, while insulating these institutions from the effect of the expiration of the exemption and of future changes in the upper age limit of the ADEA protected age group. Ohio and South Dakota moved to raise the state minimum allowed age of mandatory retirement to 70, negating the effect of the ADEA tenured faculty exemption, but allowing mandatory retirement policies of 70, legal under State law, to be altered by future changes at the Federal level. The other six states adopted changes that permit insitutions within these states to take advantage of the faculty exemption. This may cause the expiration of the exemption to affect retirement policies of tenured faculty members and will mean that future changes in the Federally protected age group will alter the minimum standards that institutions of higher education in these states would have to meet.

Finally, in the third group of states, those with both a BFRPE and a capped age limit of 65 or less, most states did not amend pre-1978 legislation. The three that did (Delaware, Indiana, Nebraska) make changes did not preempt the 1978 ADEA Amendments' tenured faculty exemption. Delaware raised its maximum age to 70 but continued its BFRP exemption, as did Nebraska. Indiana specifically exempted compulsory retirement below 70 when it extended protection against other forms of age discrimination to persons between 65 and 70. In Wisconsin an executive order disallowed mandatory retirement below 70 for public employees. Thus, in all of these states, with the exception of public employees in Wisconsin, the 1978 ADEA Amendments control the legal limits of mandatory retirement policies set by instititutions of higher education for tenured faculty members.

Conclusion

This brief review of state laws dealing with the allowed limits on mandatory retirement policies of tenured faculty members prior to 1978 and changes in 1978 and 1979, demonstrates that at the time of passage the 1978 ADEA Amendments were broader than the laws against age discrimination in most states. Subsequent change resulted in many State statutes conforming to Federal standards in that the mandatory retirement of tenured faculty was permitted as early as age 65 either through a continuing BFRPE at the state level or a specific exemption for higher education.[19]

In short, unless States move to amend their laws, the expiraton of the faculty exemption and any future changes in the age group protected by federal law will have an immediate impact on the legality of mandatory retirement provisions for tenured faculty within the great majority of states. This is not to imply that all institutions will be so affected, since many institutions, though earlier mandatory retirement is permitted by law, set no or higher ages of mandatory retirement. Whether or not institutions currently set a mandatory retirement age between 65 and 70 or not, in all but a few States, Federal law must be considered the binding constraint on an institution's ability to adjust mandatory retirement policies in their adaptation to changed economic policies.

D. Attitudes of Administrators and Faculty Members

Perhaps the most useful report of institutional (administrators') attitudes comes from the studies by the American Council on Education's Policy Analysis Service (PAS). (See Results of the PAS Followup Survey on Mandatory Retirement, February 16, 1979.) Their surveys indicate strong opposition to a complete uncapping of the age of mandatory retirement, with 44 percent of institutions opposed, another 25 percent not opposed but favoring a permanent exemption for tenured faculty members, and still another 25 percent not opposed but concerned about the implications of uncapping for colleges and universities. Opposition to complete uncapping was strongest in the private sector, especially among universities and four-year colleges. Within the public sector, opposition was concentrated among the universites. Almost half the institutions reported plans to make use of the temporary exemption for tenured faculty memebers; many of those who reported they would not use the exemption indicated that they were prohibited from doing so, they already had a mandatory retirement age of 70, or the exemption did not apply because they did not have a tenure system.

Our survey is the only one we know of that asked faculty members for their views on mandatory retirement age legislation. When asked whether they favored a continuation of the present exemption for tenured faculty members, slightly more than 70 percent of the respondents indicated opposition; 20 percent favored continuation of the exemption, with another 8 percent uncertain. The support for legislation wthat would completely eliminate the mandatory retirement age was somewhat less strong. Slightly less than 60 percent of the respondents said they "favored" or "strongly favored" complete elimination of mandatory retirement age. Twenty-six percent were "opposed" or "strongly opposed," with 14 percent uncertain.

There was some diversity of opinion among respondents from different types of colleges. Whereas 70 percent of faculty members at two-year colleges favored complete elimination of mandatory retirement age, this figure dropped to 60 percent for faculty at 4-year colleges and to 55 percent for faculty members at universities. There were no appreciable differences between respondents from public and private institutions.

Attempting to draw any conclusions from these two studies is hazardous. But several tendencies seem to emerge. With respect to the exemption many institutions are not affected by it. For those institutions where it can apply, most intend to use it until 1982. The implication is that institutions using the exemption would prefer to have it be made permanent. Faculty members, many of whom are not subject to the exemption, strongly favor its termination in 1982. The responses to the prospect of legislation that would completely uncap mandatory retirement age are less favorable.

Roughly two-thirds of the institutions would oppose uncapping and seek to have the present exemption made permanent, with the strongest support for this position coming from private sector institutioins, especially universities and four-year schools, and from public universities. Just over a majority of faculty members favor complete elimination of the mandatory retirement age with the sentiment for this position most strong among two-year college faculty members and least strong among faculty members at universities.

Section 4. Results from Survey of Educational Institutions

Introduction

This section of the report highlights some of the key findings from the analysis of the institutional survey data. We concentrate attention on how the mandatory retirement age and changes in it affect retirement probabilities, on pension plans and how they affect retirement patterns, and on how the interplay of mandatory retirement, pension benefits, and other institutional characteristics combine to affect retirement patterns.

The data used in this analysis come from a special survey of institutions of higher education conducted furing the spring of 1980. The survey of a stratified sample of institutions, drawn to reflect the population of instititutions with 250 or more students and regular degree-granting status, produced a 53 percent response rate, with 298 institutions responding. The response rate amd spread of responses by institititutional type was such that we feel we have an adequate representation of the universe of higher education institutions.

A. Definition of Retirement. We define "retirement" as the shift from a regular job at a particular institution. This shift may not imply the total cessation of work. Thus, two faculty members leaving employment at an institution at age 65 will have the same "retirement" age but one may choose not to work and the other may be offered full-time work elsewhere. Or a faculty member may be officially retired but then rehired on a temporary basis. Early the age of "retirement" as defined in this study is not independent of other job opportunities. Taking into account a variety of factors, including institutional policies and alternative employment options, each faculty member will determnine an optimum retirement age which will maximize expected utility over his or her remaining lifetime. For some faculty members retirement may mean labor force withdrawal. For others, institutional policies may constrain the allowed age of retirement, forcing individuals with other preferred retirement ages to cease work. To the extent that these institutionally permitted ages of retirement diverge from the desired retirement ages, change in institutional policies may influence the former without affecting the latter.

The focus of this study is to suggest the extent to which changes in institutional mandatory retirement age policies will allow faculty members who wish to retire at later ages to do so. At the same time, other changes in both higher education and in the wider economy, might be shifting the age at which faculty members would optimally retire from a particular institution. Thus, the same phenomenon--later age of retirement--may be due to different causes. A mandatory retirement age change may merely allow faculty members who would have always preferred later retirement to do so. On the other hand, a change in the mandatory retirement age may only permit recent changes in desired retirement age to be realized. Whether a change in the mandatory retirement age is a direct cause or only a constraining factor in retirement is important--but difficult to distinguish--in understanding the direct effect of the 1978 ADEA Amendments on future retirement patterns in higher education. The increasing popularity in higher education of early retirement options that combine part-time work with supplemental retirement annuities mean that part-time retirement cannot be ignored entireley in a study of retirement in higher education. The possibility of part-time retirement may even have an effect on an individual's expected age of retirement although the direction is ambiguous. Likewise, part-time retirement offers combined with pension supplements have budgetary cost implications that are not immediately obvious. Thus, if gradual retirement programs are instituted when the mandatory ertirement age is relaxed, the retirement age and cost implications are ambiguous. While the term "retirement" will consistently refer in this study to the total cessation of work at an institution, gradual retirement options will be examined with considerable attention paid to their effect on retirement timing.

Through their retirement policies, most institutions have established an age range over which retirement with pension benefits is permitted. This age range is indicated by reference to an institutions's normal, mandatory, compulsory and early retirement age. These ages are not standard across all institutions but rather are defined by the retirement policies set by each institution. "Mandatory retirement" age at one institution may be earlier than "normal retirement" age at another. "Early retirement" at one may occur later than what would be "normal" at another. While these terms are useful, their definitions must be carefully specified and variations among schools noted.

Normal retirement implies an age at which retirement is expected to occur though it may not be the age at which most retirements do in fact occur. It is, however, the standard age of retirement assumed for establishing desired income replacement levels or absolute retirement income to be provided by the relevant pension plan. In our survey, this age was defined as the earliest age at which full retirement beneftis were available.

Mandatory retirement age is that age beyond which a faculty member may not automatically continue employment. Work beyond this age requires explicit extensions, usually on a one year basis. In one sense, institutional mandatory retirement ages can be viewed as a maximum age, an upper limit for regular employment. This contrasts with the minimum mandatory retirement age, as established by the ADEA Amendments. Effectively, this sets an age below with individual faculty members cannot be retired for reasons of age.

A somewhat different term, compulsory retirement age, is used to refer to that age beyond which extensions of service are no longer permitted, even at the discretion of the administration.

Finally, early retirement is retirement prior to the normal retirement age. It is defined as that age range prior to the institutions's normal retirement age during which retirement benefits are actuarially adjusted to account for the longer period over which retirement benefits will be paid.

B. The Institutional Setting

The potential effects of the 1978 ADEA Amendments are affected by several key variables. One is the extent to which institutions and faculty members operate under a system of tenure or indefinite appointments, are subject to mandatory retirement ages of less than 70; are covered by the present exemptions, have options of continuing to work because the age of compulsory retirement exceeds the age of mandatory retirement; the age distribution of faculty members; and prospective changes in enrollments that will affect the demand for faculty members. We try to summarize these effects, noting any striking differences among institutions with certain common characteristics.

1. Tenure. A key part of the ADEA exemption for the academic sector was its restriction to tenured faculty members or those with indefinite appointments. In our sample almost 92 percent of currently employed full-time faculty members age 45 and above are employed in schools with tenure systems. Less than 8 percent are employed in shcools without tenure systems. Among four-year institutions and universities, a relatively small fraction of institutions responded negatively to the question of whether they had a tenure system. Two-year institutions, both public and private, are least likely to have tenure systems. Thus, while tenured faculty members are most likely to work in four-year colleges and universities, the small number of institutions without tenure and their small size means that there is little difference in the distribution of tenured faculty and all full-time faculty.

2. Mandatory Retirement at Institutions. Despite the exemption granted to tenured faculty members, an exemption that covers the vast majority of faculty members, a sizeable number of institutions have already changed their mandatory retirement provisions to conform to the new law. Moreover, prior to the ADEA Amendments many institutions had a mandatory retirement age of 70 or above. Our questionnnaire not

only provides information on these recent changes since the passage of the Amendments in 1978, but also enables us to compare mandatory retirement age practices before and after passage of the amendments.

a. Mandatory retirement Provisions Prior to the ADEA Amendments. As of January 1, 1978, 79 percent of all institutions had some age of mandatory retirement (Table 1). Among institutions with an age of mandatory retirement, Sixty-nine percent set this age at 65, 19 percent established 70 or over as the age at which faculty retirement was mandated, and 6 percent had a mandatory retirement age between 65 and 70. The other 5 percent did not specify their mandatory retirement age.

The percentage of institutions with mandatory retirement provisions varied considerably across institutional type. All private universities in our sample reported having a mandatory retirement age in 1978. This was also true of virtually all institutions (97 percent) in the public university group. Public four-year colleges followed with 92 percent and private four-year colleges with 86 percent. Two-year institutions were least likely to report a mandatory age (47 percent of private and 67 percent of public institutions).

Even greater variation existed in the age of mandatory retirement among different types of institutions with a mandatory retirement age. For example, private and public universities differed little in the probability of having had a mandatory retirement age prior to the passage of the ADEA Amendments. Yet only 41 percent of public universities had a mandatory retirement age set at age 65 while 70 percent of private universities had a mandatory retirement of that age. An even higher percentage (80 percent) of private, four-year colleges with a mandatory retirement age set that age at 65. Whereas less than half of the private two-year colleges had an age 65 mandatory retirement age, over three-fourths of public two-year colleges had such an age.

At the time of the passage of the 1978 ADEA Amendments about half of all full-time faculty members were employed in institutions with a

Part V

Table 1

Institutions With Mandatory Retirement Provision and Age: Pre-1978

Type of Institution	Percent of Institutions With No MRA	Percent of Institutions With MRA	Percent of Institutions with MRA by Age of MRA 65	66-69	70+	Unknown[1]
PRIVATE	16.5	81.9	77.8	2.8	18.1	1.5
2-Year	48.7	47.2	47.9	0.0	43.0	8.7
4-Year	13.0	85.7	80.2	2.3	16.1	0.9
University	0.0	100.0	70.0	12.4	17.6	0.0
PUBLIC	21.0	76.4	61.2	9.2	20.7	9.0
2-Year	30.5	67.0	76.3	3.7	9.8	9.9
4-Year	5.2	91.9	42.7	15.7	33.9	7.8
University	2.2	96.7	40.8	15.2	34.7	8.3
TOTAL	19.0	78.9	69.1	6.1	19.4	5.4

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[1] Institutions eliminating MR after 1978 were not asked to report their pre-1978 MRA.

mandatory retirement age of 65 (Table 2). An additional 23 percent were employed in institutions whose mandatory retirement age was between ages 66 and 68; these faculty would still be covered by the exemption. Only 26 percent of all faculty members were covered by a mandatory retirement age of 70. Because private institutions, particularly private universities, and four-year colleges were more likely to have a 65 mandatory retirement age, faculty members covered by a 65 mandatory retirement age were concentrated in private institutions with 37 percent compared to the 23 percent of all full-time faculty employed in private institutions.

Nevertheless, the high percentage of public institutions among the total population meant that most faculty members covered by the young mandatory retirement age of 65 were still employed in public institutions (63 percent). A relatively small fraction (only 11 percent) of faculty members covered by an age 65 mandatory retirement rule were employed in private universities, with another 26 percent employed in private four-year institutions.

b. Changes Prompted by the ADEA Amendments. Some significant changes have occurred since passage of the ADEA Amendments. Although institutions with a mandatory retirement age below 70 were permitted to continue mandatorily retiring their older faculty at that age until 1982, many institutions took steps to bring their mandatory retirement rule into conformity with the ADEA amendments (Table 3). Between the beginning of 1878 and their response to our questionnaire in early 1980, 29 percent of all institutions made some change in their mandatory retirement age. In all but one case this was to raise the mandatory retirement age by bringing it into conformity with the amendements. The remaining 68 percent did not change their mandatory retirement provisions. This is not surprising because in only 34 percent of all institutions was the mandatory retirement age below 70. The changes that took place occurred primarily among public institutions. Thirty-eight percent made some change in their mandatory retirement provisions as contrasted to only 18 percent of private institutions. These changes were of all

Table 3.

Distribution of 1980 Full-Time Faculty by MRA Prior to 1978

Type of Institution	No MRA	Abolished Since '78[1]	65	66-68	70+	Unknown	All
			Age of MRA				
PRIVATE	1.1	0.3	17.1	1.6	2.6	0.3	23.1
2-Year	0.4	0.02	0.2		0.1	0.1	0.7
4-Year	0.7	0.3	11.8	0.6	1.6	0.2	15.4
University			5.2	1.0	0.8		6.9
PUBLIC	6.2	5.6	28.9	11.7	23.1	1.6	76.9
2-Year	4.4	2.5	16.1	0.2	2.6	0.4	26.2
4-Year	1.6	2.0	6.8	6.8	11.0	0.9	29.3
University	0.1	1.1	5.9	4.6	9.5	0.3	21.5
TOTAL	7.3	5.9	46.0	23.3	25.7	1.9	100.0

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[1] See Table V-2.

Table 3.

Changes in Mandatory Retirement Provisions Since AADEA

	Percent Institutuions		
	Public	Private	All
No Change	60.0	78.8	68.5
Remain at			
65	23.8	44.9	33.3
66-68	0.6	2.1	1.3
70	14.1	14.8	14.4
75+	0.5	0.5	0.5
No MRA	21.0	16.5	19.0
Change	37.7	18.2	28.8
Changed Age			
65 to 70	23.1	16.6	20.1
65 to unknown		0.2	0.1
66-68 to 70	6.4	0.2	3.6
70 to 65	0.9		0.5
Eliminated MRA	7.3	1.2	4.5
Unknown MRA	2.5	3.2	2.8

types. Of those that did change, 70 percent raised their age from 65 to 70. Another 13 percent moved from age 66-68 to age 70, and sixteen percent of the changers eliminated mandatory retirement entirely.

Only 27 percent of all private institutions with mandatory retirement ages below 70 made changes as contrasted to 55 percent of similar public institutions. That public institutions were more responsive than private institutions may say less about differential institutional behavior than about external forces for change. Many public institutions may have made changes prompted by the requirements of state legislation or executive orders to treat all public employees alike.

c. Mandatory Retirement Provisions in 1980. As a result of these changes, only 36 percent of public institutions still (at the time of the survey in spring 1980) had a mandatory retirement age of 65 (Table 4); this compares to 61 percent two to three years earlier. And only 57 percent of private institutions had a mandatory retirement age of 65 compared to 78 percent prior to the ADEA. The shift in age is evident when the percentage of institutions with a mandatory retirement age of 70 is compared before and after the Amendments. Currently, 63 percent of public institutions and 40 percent of private institutions have a mandatory retirement age of 70 compared to 21 and 18 percent respectively prior to the ADEA Amendments.

The results from out data indicate clearly that almost all private two-year institutions now conform to the 1982 provisions of the law, that four-year private institutions are rapidly moving in that direction, and that private universities have moved very slowly. Prior to the ADEA Amendments, 70 percent of private universities with a mandatory retirement age set it at 65; since then the percentage has fallen to the current 63 oercent. This contrasts sharply with the behavior of public universities where almost half that previously had a mandatory retirement age of 65 raised or eliminated it.

Table 4.

Institutions With Mandatory Retirement Provisions and Age: 1980

Type of Institution	Percent of Institutions With No MRA	Percent of Institutions With MRA	Percent of Institutions with MRA by Age of MRA 65	66-68[1]	70	75+
PRIVATE	44.7	65.3	56.9	2.7	39.9	0.6
2-Year	52.9	47.1	5.2		85.1	9.6
4-Year	16.1	83.8	59.9	2.4	37.7	
University	0.0	100.0	62.8	9.5	27.7	
PUBLIC	48.1	51.8	35.7	0.9	62.8	0.7
2-Year	37.0	62.9	39.6		60.4	
4-Year	12.3	87.6	32.1		65.9	2.0
University	10.1	89.9	25.5	9.8	64.7	
TOTAL	23.9	76.0				

[1] 66 and 67 for publics, 68 for privates

The responses of these different types of institutions to the exemption means that currently faculty members covered by either age 65 or 70 mandatory retirement provisions are somewhat more likely to be in private institutions than in public institutions than they were prior to the passage of the amendments This difference is not as great as might be expected. Currently, 60 percent compared to 63 percent prior to 1978 of all faculty members subject to an age 65 mandatory retirement age are employed in public institutions, while currently 40 percent versus the earlier 37 percent are employed in private institutions. More significant, however, at the time of the survey only one-third of all full-time faculty faculty members were employed in institutions with a stated mandatory retirement age of 65. Half are covered by an age 70 mandatory retirement age provision, and 13 percent are employed in institutions without any mandatory retirement provision. Thus, although the raising of the exemption may be important for particular types of institutions, it will affect only one-third of all full-time faculty members. This group is almost equally divided among faculty members at two-year institutions, four-year colleges, and universities.

By contrast, raising the age of mandatory retirement above 70 or its elimination would affect the large majority of faculty members--87 percent--and institutions of higher education--76 percent.

3. Compulsory versus Mandatory Retirement. The impact of legislation requiring changes in mandatory retirement age provisions depends in part on the strictness with which these provisions have been applied to faculty members in the past. If they have not been strictly enforced, then the effective changes in retirement patterns due to the law could be minimal.

Our survey questioned institutions about the ability of faculty members to receive extensions to continue working beyond the mandatory retirement age either at their own or their administration's initiative. We also inquired about the maximum age to which faculty members granted such extensions could work. Surprisingly, only a tiny fraction--4 percent--of all institutions report that retirement is required at age 65 (Table 6). The largest group--37 percent--of institutions reported no age limit to

Table 5.

Distribution of Full-Time Faculty by Mandatory Retirement Age

Type of Institution	MRA 65	66-69[1]	70+[2]	None	Unknown	All[3]
PRIVATE	12.2	1.4	7.4	1.4	.6	23.1
2-Year	0.1		0.3	0.4	0.1	0.7
4-Year	8.1	0.6	5.4	1.1	0.2	15.4
University	4.1	0.8	1.7		0.4	6.9
PUBLIC	18.4	2.5	42.9	11.8	1.3	76.9
2-Year	10.9		8.1	6.9	0.4	26.2
4-Year	4.1		20.6	3.7	0.9	29.3
University	3.4	2.5	14.3	1.2		21.5
TOTAL	30.6	3.9	50.3	13.2	1.9	100.0

[1] 66 and 67 for (5) public institutions, 68 for (4) private.

[2] Age 80 in (1) public with 0.9% of FFAC, Age 75 in (1) private with .02% of FFAC.

[3] Excludes 11 institutions (3.8%) with no FFAC data.

Table 6.

Compulsory Retirement Age

Type of Institution	Maximum Age of Extensions Beyond Age of Mandatory Retirement						
	No MRA	No Age Limit	65	66-69	70	75+	Don't Know
PRIVATE	20.7	47.1	3.3	0.3	21.8	1.6	5.0
2-Year	52.9	24.6	4.8	0.0	10.3	8.1	4.1
4-Year	17.4	49.0	4.6	0.1	23.0	0.8	5.7
University	0.0	64.4	0.0	3.2	26.8	0.0	5.6
PUBLIC	29.5	30.0	4.5	2.2	26.0	5.5	2.3
2-Year	39.6	21.8	0.0	2.3	23.7	5.3	2.3
4-Year	12.4	41.1	3.9	1.7	31.4	6.0	2.9
University	10.1	58.0	0.0	2.9	23.1	5.8	0.5
TOTAL	25.7	37.8	3.9	1.3	24.1	3.7	3.6

extensions while others grant extensions for one to five years. This means that the effective mandatory retirement age is somewhat higher than is evidenced by official mandatory retirement ages. Interestingly, of the 34 percent of institutions with a mandatory retirement age of 65, less than 10 percent of them also had a compulsory retirement age of 65.

While mandatory retirement age provisions do set a time at which faculty members may be customarily retired, extension policies allow institutions to extend appointments beyond that age. This implies that by either formal or informal means these institutions do evaluate the advantage of extending some faculty contracts while terminating others. As a consequence, a higher mandatory retirement age will not for many institutions present an entirely new situation. In fact, opportunities to continue teaching have existed at most institutions in the recent past, whether or not all faculty members wished or were allowed to take advantage of working beyond the mandatory retirement age.

4. Age Distribution of Faculty. The simulations conducted in this study and in other studies indicate that the short and long term impact of a change in mandatory retirement which compels further changes in the retirement system will depend on the age distribution of faculty members.

If large proportions of the faculty are spread over the ages 55-64 range, the short-term pressures on institutions will be more severe than if the faculty is composed largely of younger persons, perhaps reflecting the relative youth of the institution itself. Accordingly, we sought to collect data on the age distribution of faculty members at each institution. What is most striking about these measures is the broad similarity in the age distributions of faculty age 45 and over across the private, public, two-year, four-year, and university groups (Table 7). It is true that two-year institutions appear to have a somewhat older faculty structure than do the other groups of institutions. Overall, however, public and private institutions within each of these groups vary little. This is somewhat surprising because of the considerable variation across these institutions in the current mandatory retirement age; yet this is consistent with our findings about the practices of many institutions in extending employment beyond the mandatory retirement age.

Table 7

Distribution of Faculty Age 45 and Above

Type of Institution	Age						
	45-49	50-54	55-59	60-64	65-69	70+	45+
PRIVATE	32.9	28.3	19.9	13.6	4.2	1.1	100.0
2-Year	34.0	26.1	16.3	14.4	7.2	2.0	100.0
4-Year	32.3	28.9	19.9	13.6	4.1	1.2	100.0
University	34.8	26.6	20.4	13.9	3.7	0.5	100.0
PUBLIC	32.7	27.1	21.9	13.4	4.3	0.6	100.0
2-Year	29.5	29.6	20.2	16.6	3.8	0.4	100.0
4-Year	35.6	26.7	22.1	11.1	4.4	0.9	100.0
University	32.2	26.1	23.0	13.7	4.6	0.5	100.0
TOTAL	32.8	27.4	21.4	13.4	4.3	0.7	100.0
Other Estimates							
COFHE	30.0	26.1	22.2	15.4	5.5	0.6	100.0
Ladd-Lipset	32.1	31.1	19.4	14.6	2.9		100.0

Despite the broad similarities in age structures, there is some variation by type of institution in the percentage of faculty within five years of retirement. The percentages of faculty age 60 to 64, relative to faculty age 45 and above, varies from less than 5 percent to over 30 percent. No discernable pattern appears across types of institutions or by age of mandatory retirement. This leads us to conclude that while no particular type of institution is uniformly confronted by a particulaly old or young faculty, a few institutions within each group will be faced over the next five years with predicting the retirement behavior of a significant perentage of their faculty, those 60-64. Two-year institutions are most likely to face this predicament, since over half of those institutions with 30 percent or more of their faculty 45 years of age and over, and expected to retire within the next five years, are two-year public institutions.

5. Projected Student Enrollments. A major uncertainty faced by institutions projecting future hires of new faculty members is the expected growth in student enrollments. Enrollment growth will allow them to absorb higher retirement ages and still permit them to hire young, new faculty members.

Our questionnaire asked institutions to provide estimates of projected enrollments of full and part-time students in 1983. Unfortnately, only 59 percent of institutions could provide such projections. While the low response rate on this question reduces the validity of our results, it also suggests that a high proportion of institutions of higher education lack some of the basic information that is necessary for accurate personnel planning. Or their information is necessarily so uncertain that no reasonable precise projection could be provided. The data provided by institutions do give us some indication of what this part of the sample projects about future growth and decline. As expected, the next three years is seen as a time of neither precipitous growth nor precipitious decline in student enrollments. Overall enrollments are expected to increase by approximately 5 percent. The rate of growth for small schools is dependent on the initial small size of many schools and as a result large percentage increases signify the addition of only a few hundred students. Thus, it is perhaps more valid to look at the expected growth at institutions with enrollments of 2,500 and over.

Large two-year institutions expect the most rapid growth, with rates of between 8 and 11 perent over the next three years. Four-year colleges in the public sector expect a period of stability while private four-year institutions expect more rapid growth of between 6 and 12 percent in the number of enrolled students. Public universities expect enrollments to be stable while private universities are the most pessimistic in expecting a decline in enrollment of 10 percent. Whether these enrollment predictions will be realized remains to be seen.

The pessimistic projections of private universities are important in evaluating their response to proposed changes in legislation governing mandatory retirement age. In fact, institutions with mandatory retirement age of 70 and 65 across each type of institution expect approximately identical rates of growth in enrollment.

6. Summary. The data on tenure, mandatory retirement, faculty age structure, extension policies, and student enrollment prospects provide perspective on the environment within which institutions in our sample will have to adapt to a rising age of mandatory retirement. In this environment mandatory retirement age policy is not uniformly administered since extension policies are in force; data on the age structure for institutions with age 65 mandatory retirement indicate that extensions are often used since a surprisingly high percentage of faculty in institutions with mandatory retirement ages of 65 and older are above that age.

Particular institutions, however, may be faced with higher numbers of delayed retirements over the next five years than will others. This could be an acute problem if they find that faculty between the ages of 60 and 64 who would otherwise have retired, postpone their retirement when the exemption expires. Clearly, however, if institutions have used extension police liberally in the past, even institutions with a high proportion of faculty age 60 to 64 may in fact find little change in retirement patterns as the stated age of mandatory retirement age rises. It is important to note that the majority of institutions with particularly old age structures are those institutions whose major mission is teaching and not research.

Student enrollment growth projections indicate that if faculty members do postpone retirement and, as a result, their employing institutions experience fewer job openings as a result of retirements, the small projected increases in enrollment will provide little flexibility in augmenting the total size of the faculty during this period. We have already noted that large universities are particularly pessimistic about the enrollment increases they can expect over the next three years.

C. Retirement Benefits and Their Impact on Retirement.

1. General Characteristics

Important factors determining retirement timing are the amounts of expected retirement benefits and changes in these amounts with additional years of work. Virtually all institutions of higher education offer their faculty members some kind of retirement plan coverage. Among those covered by plans, 83 percent of all institutions offer either TIAA-CREF or a State plan. It is primarily the small institutions that offer either on coverage or a non-state non-TIAA-CREF plan. Thus, almost 95 percent of full-time faculty members are employed in institutions with either a TIAA-CREF or State plan. For this reason we concentrate our attention on the characteristics of TIAA-CREF and state plans and the provisions which encourage or discourage retirement age age 65 for institutions in our sample.

The distribution of instititutions offering these plans are shown in Table 8. It is apparent but not unexpected that private institutions are covered primarily by TIAA-CREF, while most public institutions offer a State plan. Thus, to some extent our attempt to isolate the impact of TIAA-CREF versus state plans on retirement probabilities is confused by the high correlation between institutional type and plan offered. Fortunately, however, there are high percentages of four-year public institutions (32 percent) and public universities (25 percent) that offer a TIAA-CREF plan as well as a State plan. Within both the public and private groups there is little variation in type of plan offered by age 65 and age 70 mandatory retirement.

TIAA-CREF and State plans differ sharply in the method of calculating benefits. While TIAA/CREF calculates benefits on the basis of past contributions and interest accumulated over time on these contributions, most state plans calculate benefits on the basis of average salary and past service credits.

When a person covered by a state plan chooses to postpone receipt of benefits from age 65 to age 66 by working an additional year, the absolute amount of the annuity expected will generally rise both because the average salary increases, if higher earnings are expected during that additional year and because the average is multiplied by an additional year of service. Under TIAA/CREF plans the shorter lifetime of a person retireing at 66 would raise benefit amounts even if the total accumulation did not

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Table 8

Types of Plans Offered by Institutions of Higher

(columns total 100.0 across)

Type of Institution	TIAA Only	TIAA with Other non-Public	TIAA & State	State Only	State with Other Non-TIAA	Other Only	No Plan or no Information
PRIVATE	62.1	6.3	0.3	1.3	0.0	15.0	14.2
2-Year	34.8	8.1	0.0	12.3	0.0	16.3	16.4
4-Year	64.8	5.9	0.0	0.0	0.0	16.3	13.1
University	76.4	8.4	6.4	0.0	0.0	6.0	2.8
PUBLIC	9.3	0.0	15.8	67.5	1.6	0.9	5.0
2-Year	0.6	0.0	7.3	85.0	2.5	0.0	4.6
4-Year	21.4	0.0	31.5	38.2	0.0	2.9	6.0
University	37.4	0.0	24.8	33.8	0.0	0.0	1.1
TOTAL	33.3	2.8	8.8	37.4	0.9	7.7	9.2

change between age 65 and age 66. A person covered by TIAA/CREF, can also expect additional accumulations both because of the additional contributions made based on the additional year's salary and the aditional dividends that will be earned by the accumulated amount.

2. Annuity Value of Pension Benefits

For each State plan and TIAA/CREF we estimated the annual annuity that would be received by a person at age 65 and if retirement were postponed by one year the annuity that would then be received at age 66. Such a person is assumed to have worked from age 32 at a beginning salary of $3,200 until age 65 when earnings as a full professor were $33,150. This earnings stream is based on actual data obtained on earnings of college and university faculty at various ranks from 1946 to 1980. In addition, we hypothesized that if such a person continued working until age 66, salaries would rise by 8 percent to $35,800.

In Table 9 the means of the annuities, present values and their change are presented. In comparing across State plans the annuity a person with this salary schedule would be eligible for at age 65 we find large variation, ranging from a low of $9700 to a high of $26,000 with a mean $18,824. If this person continued to work for an additional year, receiving an 8 percent higher salary, benefits would rise by an amount ranging from a low of seven percent to a high of 16 percent, depending on the benefit formula of the plan. The mean increase is 11 percent. At age 66 our hypothetical person would be eligible for a mean annuity of $21,016, ranging from $10,800 under the "least generous" plan to $29,374 under the "most generous" plan.

At first glance this rise in annual benefits might appear to encourage people to postpone retirement because it makes them eligible for higher retirement benefits later. However, evidence has been presented in other studies that it is not the absolute size of a benefit but the present value of future benefits discounted to the present that is of primary importance in determining retirement timing. Discounting the stream of all future benefits gives us a different picture of the financial advantage to faculty members of continued work beyond age 65. Assuming no post-retirement inflation adjustments, we estimate that a nominal discount rate of 15 percent is the most realistic rate to use in evaluating the present value of these benefits. Discounting all future benefits at 15 percent reduces the present valuye of benefits between age 65 and 66 for all plans by 6 percent. In the case of the "most

Table 9.

Mean Size of Benefit and Present Value of State & TIAA Plan Benefits

		Discount Rate	
Mean Value of	10%		15%
Annual Benefit at 65		18,824	
Benefit at 66		21,016	
Change		11.5%	
Present Value at 65	137,778		135,027
Present Value at 66	103,177		97,214
Change	-2.1%		-5.9%
TIAA-CREF			
Benefit at 65		18,645	
Benefit at 66		20,731	
Change		11.2%	
Present Value at 65	136,467		133,193
Present Value at 66	102,195		95,893
Change	-2.4%		-6.2%

generous" plan (in which annual benefits rise by 16 percent between ages 65 and 66) the present value of the future income stream declines by 2 percent between those two ages. For the "least generous" plan (benefits rise by 7 percent) the decline in present value if benefits were postponed would be 11 percent. This situation is only somewhat improved if we assume a 10 percent discount rate. In this situation, the mean decline is "only" 2 percent.

Examining TIAA-CREF benefits we see that the situation is not much different. Annual benefits rise by a mean of 11 percent if retirement is postponed from age 65 to 66. Interestingly enough this benefit increase is the increase that a person with the same salary history could experience under the State plans. This suggests that despite fundamental differences between defined benefit and defined contribution pension plans, an additional year of service and the raising of the income average upon which defined benefit plan benefits are based, results in an increase exactly equal to that which would be experienced under a typical TIAA-CREF plan. Present values and changes with postponement are also comparable.

In concluding this examination of annual annuities, present values, and their changes with an additional year of work, it is important to emphasize that for all State plans, with only a few exceptions, and TIAA-CREF plans when future benefits discounted at 10 percent, the present value of these benefits declines when benefits are postponed. TIAA-CREF plans are comparable to most State plans both in absolute size and increase in the annuity which would be received if a person with the hypothesized wage profile postponed benefits and worked an additional year and in the change in present value of the future income stream upon postponement. Differences among institutions in salary level and annual changes will also influence final benefit amounts and change. However, these differences will not be due to basic differences in plan characteristics.

3. Inflation and Retirement Benefits

a. Introduction. The achievement of the adequacy goals of a retirement income program may be frustrated by price inflation. Unless retirement income levels are adjusted as consumer prices rise, the standard of living of retired persons will decline over time to a level far below that contemplated by institutions in formulating retirement income programs or that expected by retirees as they contemplated retirement. Thus, expected price changes during retirement can have a major effect not only on real retirement benefits of retirees but on the age at which they choose to quit work.

This section discusses several methods that have been incorporated into academic retirement plans to offset the effects of inflation on retirement income. There are two principal methods: (1) adjustments to post-retirement income, and (2) mechanisms that reduce the impact of pre-retirement inflation on intital retirement benefits.

Virtually all faculty members in higher education are employed in institutions that participate in either a State plan covering college faculty or in TIAA-CREF. In addition, 84 percent of all institutions and most faculty members participate in Social Security. The inflation adjustment mechanisms of these three types of retirement income programs is discussed.

b. Adjustments to Post-retirement Income.

Variable annuity: Retirement income under a variable annuity is stated in terms of units, with the dollar value of the unit determined by the aggregate dollar value of the fund supporting the pension liability. Under these plans there is no guaranteed benefit amount. Variable annuity options are offered by six of the State plans that cover institutions responding to our survey. Experience suggests that generally faculty members are not eager to participate in the variable annuity option, and as a result they receive the major portion of their annuity from the defined benefit component of the plan.

The variable annuity coponent of most State plans is similar to that of CREF, and this makes it possible to evaluate the recent ability of variable annuities to adjust to inflation by referring to the CREF experience. TIAA-CREF participants have the option of splitting contributions between the fixed annuity component, TIAA, and the variable annuity component CREF. However, as recent experience of CREF attests, variable annuities are subject to large short-term fluctuations, even though long-term gains may approximate price increases.

Adjustments to fixed annuities: Post retirement adjustments to fixed annuities are offered by the 43 State plans that cover institutions in our sample. In addition, the fixed annuity received from a TIAA account is adjusted by experience dividends, as discussed below.

Automatic adjustments: These adjustments may be triggered by a price or wage index, although in nine state plans in our sample benefit adjustments are unrelated to price or wage changes. The only index used to adjust post-retirement benefits for the plans of responding institutions is the Consumer Price Index (CPI). Social Security benefits are fully CPI adjusted. The most prevalent pattern for faculty pension plans allows a partial CPI adjustment up to some limit, usually 3-4 percent but running as high as 7 percent. Three plans have either full or partial CPI adjustments without caps.

Four plans in our sample offer an automatic constant annual increase in retirement benefits at a rate between 1.5 and 3.0 percent. Such adjustments, while predictable, increase the danger that price changes will outstrip benefit changes.

Ad hoc adjustments: Ten other plans for institutions covered in our sample offer ad hoc adjustments. These plans offer no automatic adjustments of a definite prescribed nature. Two plans state explicitly that ad hoc adjustments are based on the investment experience of the plan. These adjustments are unpredictable in that they need not be granted; if they are, the percentage adjustment will vary depending on retirement date and investment experience.

Fixed dollar annuity dividends: TIAA is an annuity that guarantees a fixed annuity equal to the annuity that can be purchased by the individual's prior contributions plus accured earnings. During retirement, investment earnings generated in excess of those anticipated by the assumed interest rate result in dividends and higher annual benefits to annuitants. Only to the degree that the investment gains are equal to inflation rates will retirees' benefits from TIAA be adjusted for price increases.

c. Adjustments to Pre-retirement Income

Pre-retirement declines in real salaries mean that the increment in future benefits resulting from an additional year of work, or an additional year of contributions, will also decline in real terms. The options for mitigating this effect of inflation on retirement benefits varies by type of plan. Defined benefit plans may (1) reduce the averaging period, or (2) calculate benefits based on real earnings. Defined contribuion plans may (3) increase required contributions or (4) provide contributions to purchase units of an investment fund.

d. Continued Work as An Adjustment to Inflation

With the possible exception of those plans with a variable annuity component, faculty members in higher education can anticipate some erosion in the real value of retirement benefit both due to declining real salaries prior to retirement as well as to inflation after retirement. Because post-retirement benefits are rarely adjusted by the full change in CPI and because some increase in salary may be anticipated if retirement is postponed, continued work may partially offset the effects of anticipated inflation. Salary and service increases will raise benefits from a defined benefit plan. Additional contributions, plus an additional year of fund earnings will increase guaranteed benefits from a defined contribution plan.

The effect of continued work on retirement benefit is illustrated in Table 10. No actuarial reduction upon retirement between 62 and 65 is assumed although such reductions are common. An 8 percent inflation rate is assumed, a not unrealistic long term rate for current retirees. In such a plan the effect of post-retirement inflation and delayed work is illustrated for three situations: no inflation adjustment, a 4 percent simple adjustment, and a 4 percent compounded adjustment.

The lower half of the table illustrates benefits at age 65 nd 62 for a faculty member partipating in a TIAA plan with a 10 percent total contribution rate, an assumed 6 percent interest factor, and a 3.5 percent contribution administrative expense factor. Benefits are those based on an assumed dividend rate during the post-retirement period. The faculty member for this illustration is assumed to have started work at age 32 in 1946-47 with a salary of $3200. By age 65 this person earned $33,150 and received salary increases of approximately 8 percent during the last few years of work.

Between age 65 and 75 a retiree can expect to have unadjusted retirement benefits decline in real terms by 54 percent--from $18,453 to $8,589 in Panel 1. If retirement had occurred 3 years earlier at age 62 the real decline would have been 65 percent. Continued work in a defined benefit plan with allowed service and salary credits untl age 65 would increase benefits by 30 percet in nominal terms over the three year period (from $14,210 to $18,543). This 30 percent difference would be maintained throughout retirement.

The third pannel shows that compounded adjustments would reduce the early retirement penalty, because early retirees would have benefits adjusted between 62 and 65 while the 65 year old retiree would "lose" three years of adjustments. The higher the CPI adjustment, the narrower the difference between early and later retirement.

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Table 10.

Illustrative Pension Benefits at Age 62 and 65 Under Four Types of Retirement Plans

State Plans: Formula = 3 years averaged x .02 x years of service

	Retire at 65 (1)	Retire at 62 (2)	Ratio of (1)/(2)
No CPI Adjustment			
At 62	(working)	[1]	
At 65	18,543	14,210	1.305
At 70	12,620	9,671	1.305
At 75	8,589	6,582	1.305
At 80	5,845	4,479	1.305
75/65	46.3	46.3	
With CPI Adjustment 4% Not Compounded			
At 65	18,543	14,778	1.25
At 70	13,125	10,058	1.305
At 75	8,933	6,845	1.305
At 80	6,079	4,658	1.305
75/65	48.2	46.3	
With CPI Compounded 4% Adjustment			
At 65	18,543	15,984	1.16
At 70	14,879	12,827	1.16
At 75	11,940	10,292	1.16
At 80	9,581	8,259	1.16
75/65	64.4	64.4	

Yearly Annuity from TIAA Plan

Assumed 10.0% of salary accumulated, 6% interest factor, and 3.5% Contributor Administrative Expense Factor.

Accum.	134,311	102,786	1.305
Benefit[2]	18,226	13,300	1.371

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[1] The retiree will receive $14,210 in current dollars at age 62 and throughout retirement. In real terms, the initial benefit at age 62 will be higher than at age 65, the reference year for calculating real benefits.

[2] Based on yearly TIAA rates effective January 1, 1979, including dividends based on dividend scale effective January 1, 1981.

The bottom panel shows the benefits under TIAA at age 65 and age 62. Benefits for early retirees would be smaller both because of 30 percent lower accumulations as a result of a shorter worklife and the actuarial adjustment.

Thus, in the absence of an inflation adjustment mechanism, prospective retirees will find that postponing retirement can significantly raise benefits and allow them to weather the impact of inflation somewhat better when they do retire.

4. Early Retirement Incentives

In addition to the regular retirement benefit formula, which may or may not encourage retirement at a particular age, many institutions have introduced retirement benefits that can be ecieved on retirement occurring prior to the normal retirement age. There is a growing literature on this topic that covers the detailed features of such programs, their costs, and their effectiveness in encouraging retirement.

Hypothesizing that many public and private institutions may wish to encourage early retirements without going through the time consuming process of lobbying for legislative change in State plans covering all State workers or in the costly route of instituting permanent changes in their TIAA-CREF plan covering all employees, we tried to obtain data on early retirement benefits that are paid out of institutional budgets and designed specifically to target on potential early retirees. Even this type of benefit which would target specific employee groups is not commonly used among the institutions in our sample, in fact, only three percent said they had such a program.

Finally, we questioned institutions about the existence of early retirement programs which are integral part of the pension plans covering faculty members. We received a far higher percentage of positive responses to this question, with 20 percent of all institutions saying they had such a program, including 36 percent of private universities and 22 percent of public universities. Two-year institutions were least likely to offer such plans. In examining the particular provisions of these plans, however, it is clear that almost half of the programs are optional tax deferred annuities which are available to faculty members through salary reductions under Internal Revenue Code, Section 403(b). Payments into such plans are made entirely by faculty members and no contributions are made by the institutions themselves. Thus, such plans are available at no or only small administrative cost to institutions and do not represent an additional benefit paid by the institution to early retirees.

While such plans do not differentiate between early and later retirees, a high percentage of instititutions see these plans as not only early retirement incentives but also as a method of increasing benefits available to faculty members at an unchanged retirement age. This may be an explicit recognition on the part of personnel administrators of the importance of the size of benefits in determining the retirement timing of faculty members.

In view of the findings presented in the section on faculty retirement expectations, we examined the percentages of institutions that allow faculty members to reduce their workload prior to normal retirement age. Only 36 percent responded that they did allow faculty members to take this option. Our findings show that, although faculty members appear greatly interested in reducing work prior to normal retirement, a large percentage of institutions have not adopted this option that might encourage faculty members to retire or to retire partially prior to expected retirement age. Only 31 percent of institutions with a mandatory retirement age of 65 provide such a program option while half of the institutions with a higher mandatory age have adjusted in part by offering the option of reducing work loads. This helps to accomodate those faculty members who wish to continue working beyond the normal retirement age and yet either wish not to continue at full-time schedules or cannot do so because their departments prefer that they not participate as actively in academic affiars. In general, institutions that allow faculty to reduce their workloads prior to retirement provide this option to all faculty members and are most likely to offer this option beginning at age 55.

D. The Effect of A Mandatory Retirement Age on the Probability of Retiring

This section explores the effect of a mandatory retirement age on the retirement rates for 1978-79 reported by institutitons in our sample. First, we look at retirement rates of public and private institutions. Next we briefly discuss the correlation between our retirement rate variable and other variables hypothesized to affect this rate. Finally, we investigate this retirement rate utilizing several variables in order to test the causal relationship.

Probability of Retirement

Definition of the Retirement Variable: We estimate the probability of retirement for each institutions's faculty from survey data on the current (1979-80) age structure of faculty, and the ages of faculty members who retired during the 1978-79 academic year.

That a mandatory retirement age may make some small difference in retirement rates is suggeted by Table 11. Mean probabilities of retiring between 60 and 65 in the public and private sector are shown, grouped by whether the institution had a mandatory retirement age of 65 or not. The second panel shows probabilities of retiring by a pre-1978 mandatory retirement age. A current mandatory retirement age of 65 may make some difference in the private sector, though little difference in retirement rates by a mandatory retirement age is apparent for public institutions in our sample.

Because recent retirees may have made retirement plans prior to the 1978 ADEA Amendments we looked at the relationship between the 1978 mandatory retirement age and retirement rates. The results are striking. In both sectors a pre-1978 mandatory retirement age of 65 increases the probability of retiring by 10 percent. Rates are identical across sector by mandatory retirement age.. The difference in the two panels may be due to the fact that schools in the public sector were most likely to have changed their mandatory retirement age in response to the 1978 ADEA Amendments, thus obscuring the relationship between mandatory retirement age and retirement timing of their faculty. This implies that recent faculty members, having made plans to retire within two years did not change their plans as the mandatory retirement age changed.

Regression Analysis

Simple correlations do not control for relationships among variables and therefore obscure the effets of particular variables on the probability of retiring. To eliminate the confounding effect of the relationship among different variables, we utilized regression anaysis to determine the probability of retiring between 60 and 65 based on a variety of variables thought to influence the retirement decision.

The two variables which are consistently significant in our equations are the change in present value of all future benefits if retirement is delayed from 65 to 66 and the health insurance variable. The finding that the former variable is significant is consistent with the conclusions of Burkhauser and Quinn (1980). The health insurance variable measuring whether retirees can continue coverage under the institution's group health plan was consistently negative in all regressions run. From this we conclude

Table 11.

Probability of Retiring at Ages 60-65 by Age of Current MRA, Pre-1978 MRA in Public & Private Institutions

	Current MRA		
Type of Institution	65	66+	All
Public	.5070	.5136	.5119
Private	.5718	.4775	.5376
	Pre-1978 MRA		
Public	.5486	.4631	.5119
Private	.5483	.4787	.5376

that whether or not an institution offers retirees the option of continuing coverage is a major determinant of whether faculty members approaching retirement age will retire or will continue working in order to maintain coverage. Although many faculty members at age 65 would be eligible for Medicare coverage, younger spouses and other dependents not eligible for Medicare may make health insurance coverage under a group plan of vital importance to older faculty members.

Variables indicating whether or not faculty members may reduce their workloads prior to retirement and indicating whether or not an institution provided supplementary early retirement benefits were included in order to test two hypotheses related to early retirement incentives. Neither of these variables appear to be significant although this may be in part that the variables are not in fact measuring the phenomenon that we would like them to represent.

Because of the importance of health insurance, we included various other fringe benefit variables in our regressions noe of which including the life insurance variable proved to be important.

Because of our findings presented earlier, that institutions with an age 65 mandatory retirement age had very different compulsory retirement age policies, we attempted to develop variables which would capture the interaction of mandatory retirement and extension policies. These results indicate that the effect of a mandatory retirement age is a much more complex phenomenon than is indicated by an analysis in which the mandatory retirement age alone is present. Clearly, extension policies matter; why they matter is not as yet clear.

Since many schools have changed their mandatory retirement age in response to the 1978 ADEA Amendments we hypothesized that in fact recent retirees retired because of plans made at a time prior to the recent change in the mandatory retirement age. Thus, we estimated the same relationship between the probability of retiring at age 60 to 65 and other variables with the pre-1978 mandatory retirement age substituted for the current mandatory retirement age. The effect of the pre-1978 mandatory retirement age is stronger than that of the current mandatory retirement age alone. The effect of the change in present value of annuities and the health insurance variable remains significant.

Our findings are consistent with other studies on the importance of changes in present value or change in annuities and the unimportance of the absolute size of retirement benefits in making the retirement decision. Health insurance is a primary determinant, suggesting that if institutions were to allow retirees to continue participation in the group health insurance plan retirement at or before normal retirement age would be more attractive. Health insurance appears to be unique among non-pension fringe benefits in its effect on the faculty retirement decision. Our findings suggest that, as we know from our survey data, mandatory retirement policies mean different things among different schools and that the critical variables might actually be the presence of extension policies, the length of extensions granted, and the liberality with which extensions are granted to persons reaching the formal mandatory retirement age. Thus, in fact, mandatory retirement might be important, although its importance is not picked up by a variable which fails to include extension policies.

Section 5. PRELIMINARY RESULTS FROM THE SURVEY OF FACULTY PERSONNEL

We report below selective results from our survey of tenured faculty members age 50 and above. Additional material will be included in the final report. These results encompass several areas of interest: the health of respondents, feelings about retirement, attitudes of faculty members toward continuation of the exemption and toward complete elimination of a mandatory retirement age; their expected age of retirement and recent changes in their expected age of retirement; awareness of the ADEA Amendments; likely responses to early retirement inducements; and likely responses to expected rates of inflation.

a. Health

Faculty members are an extremely healthy group, with less than four percent of them reporting their health as "fair" or "poor." Indeed, two-thirds of them report their health as excellent.

b. Feelings about Retirement

When asked how they felt about retirement, 45 percent said they were looking forward to it, another 30 percent were uncertain, 22 percent did not look forward to it, and less than 4 percent had no opinion.

c. Attitudes Toward the Exemption and to Mandatory Retirement Age

The attitudes of faculty members, referred to earlier, are of key importance in making any decision about continuing the present exemption for tenured faculty members to the minimum mandatory retirement age of 70. Our results reveal opposition to continuation of the exemption. Overall, 70 percent of all faculty repondents indicated that they "oppose" or "strongly oppose" continuation of the exemption The responses did not differ substantially by type (two-year, four-year, university) or control (private, public) of institution.

Considerable discussion has already occurred about the eventual removal of the minimum mandatory retirement age. We asked faculty about their attitudes toward such a change. The results indicate somewhat less enthusiasm for a complete uncapping of the age limitation. For the entire sample, 60 percent of all respondents "favor" or "strongly favor" complete elimination of mandatory retirement ages for faculty members. Faculty members at two-year institutions were most supportive of uncapping; faculty members at universities were least supportive of eliminating the mandatory retirement age. (Table 12)

It is important to recognize that some faculty oppose these changes. Thus, we find that about a fifth of all faculty members "favor" or "strongly favor" continuation of the age sixty-five exemption, but there is no evidence of differences among faculty members at different types of institutions. With respect to elimination of the mandatory retirement age, we find that almot a quarter of all faculty members oppose this change. Faculty members from universities register the strongest opposition, while faculty members at two-year institutions are most supportive of legislation to eliminate a mandatory retirement age. These results indicate that while a substantial majority favors these changes a sizeable minority remains opposed.

d. Expected Age of Retirement

Because we must ultimately assess the labor supply response of faculty members to changes in the mandatory retirement age, it is essential to determine the expected retirement age for eachfaculty respondent. Through a series of questions we asked respondents to give their best estimate of the age at which they would retire, even if this required probability statements. As a result, we were able to come up with an expected retirement age for about 90 percent of all respondents.

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Table 12

Attitude Toward Eliminating MRA

	Strongly Favor	Favor	Uncertain	Oppose	Strongly Oppose	No Opinion	Total
Private Institutions	36.5	23.7	14.2	16.2	8.8	0.6	100
Public Institution	37.0	21.5	12.0	18.2	10.6	0.5	100
Total	36.6	23.0	13.5	16.8	9.3	0.6	100
All Institutions							
2-Year	41.5	28.2	11.5	10.1	7.0	1.7	100.0
4-Year	37.3	22.3	13.9	18.3	8.2	0.0	100.0
University	34.9	22.0	13.9	18.0	10.6	0.6	100.0

We find the following results. Ten percet of the respondents have no idea as to when they will retire and 5 percent say they will never retire. Only two percent expect to retire before age 6o, 24 percent plan to leave by age 62, and another 5 percent expect to retire before age 65. Then there is a big increase, with the 26 percent expecting to retire at age 65, 5 percent in the next two years, and another 35 percent from age 68-70. About three percent plan to retire after age 71. The several critical ages come at 62 when eligibility for Social Security first occurs, at 65 which is the normal age of retirement, and at age 70 which is the present mandatory retirement age for many faculty members.

e. Changes in the Expected Age of Retirement

Almost 30 percent of the repondents indicated that they had changed their expected age of retirement over the past several years. Of this total 66 percent delayed their retirement age, 29 percent accelerated their expected retirement age, and 5 percent changed it only marginally. Among those who now expect to retire at ages 66-67, for example, most of them pushed back their expected age from 65 (Table 13). This change may represent a esponse to the shift in the age of mandatory retirement. Among those now expecting two retire at age 65, over half earlier plan ed to retire before age 65. Among those who now plan to retire at age 68-70, two-thirds had earlier planned to retire at age 65.

We inquired why people changed their expected age of retirement, classifying the response into four categories: Professional, economic, personal, and other. Among those who delayed, 58 percent gave economic reasons, 34 percent offered professional reasons, with the rest about equally divided between pers nal and other reasons. Faculty members at private schools were least likely to offer economic reasons for their changes.

These results contrast sharply with those for faculty members who accelerated their age of retirement. Professional, personal, and economic reasons were given most frequently, by 48, 26, and 18 percent, respectively.

These results give an indication of the extent to which people have recently changed their mind about their expected age of retirement, the direction and magnitude of these changes, and the different patterns of reasons given by those who delayed and accelerated their retirement plans.

Of the 30 percent who did change their minds, 85-90 percent were aware of the new legislation on mandatory retirement. It

Table 13.

Changes in Age of Retirement

Planned Age of Retirement Before Recent Change	Expected Age of Retirement at Time of Survey							
	<60	60-62	63-64	65	66-67	68-70	70+	All
<60	54.5	18.4	0.0	4.4	0.0	2.2	5.9	7.7
60-62	27.3	16.8	56.0	45.9	11.5	8.9	5.9	23.2
63-64	0.0	0.0	8.0	5.2	3.8	0.6	5.9	2.3
65	18.2	56.8	32.0	11.9	73.1	65.4	47.1	46.5
66-67	0.0	0.8	4.0	1.5	3.8	3.9	0.0	2.3
68-70	0.0	7.2	0.0	29.6	7.7	19.0	35.3	17.6
70+	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.4
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

is difficult to know whether those who changed their minds were responding to the legislation or whether instead the publicity surrounding the passage of the Amendments caused respondents to give new thought to when they would retire.

Based on these results it is difficult to directly attribute to passage of the ADEA Amendments the changes in expected retirement ages. It is possible that many people change their age of retirement over any several year period and therefore is no simple method for isolating the separate influence of the mandatory retirement age change.

Likely Responses to Early Retirement Inducements

To the extent that there is concern about faculty members delaying their retirement, given the opportunities many of them already have to continue teaching because of change in institutional practices or State laws, we wanted to know how they might respond to inducements to retire earlier. These inducements, if substantial enough, could lead to further reductions in the average age of retirement. Or to the extent that the possibility of teaching longer exists, these inducements might offset the tendency of faculty to want to continue teaching. Accordingly, we asked a series of three questions to get some indications of the possible responses of faculty members.

One question was whether individuals might retire earlier if their pension benefits were adjusted upward for changes in the cost of living even though the recipient would suffer from the reduction resulting from early retirement. Just over 20 percent of the respondents said they would retire earlier were such a package available to them. Over 34 percent said they might possibly accept this package and the remnainder were not interested or not sure. These results suggest that early retirement inducements could perhaps produce substantial response on the part of faculty members.

Another question sought to ascertain the likelihood that faculty members, as they approached mandatory retirement, would go on reduced schedules with proportionate salary reductions. This would amount to a kind of phased retirement by allowing faculty members to reduce their desired or expected age of retirement. Forty-one percent of the respondents said they would take this option. Over 50 percent said that they would not take this option.

Response to Inflation

The substantial recent inflation and its serious impact on people with fixed incomes prompted us to inquire how people thought they would react to different rates of inflation. At the time of our survey the inflation rate hovered at the 12-15 percent rate, having risen progressively over the past decade. So we wanted to know whether higher rates of inflation would cause repondents to accelerate or delay their expected age of retirement.

We first asked whether continuation of the current rate of 12-15 percent would cause them to delay. One-third of the respondents indicated they "strongly agree" that they would delay retirement if these rates continued. Another one-third indicated they agreed with the statement. Only 15 percent voiced disagreement, while the remaining 21 percent indicated uncertainty. This distriubtion of reponses suggests that there is substantial uncertainty about inflation and what it will do to the well-being of faculty members.

When asked whether an a celeration of inflation to a 20 percent annual rate, even larger percentages of respondents said they would delay retirement. We find that 47 percent strongly agreed that they would delay; another 20 percent said they agreed that this would cause them to delay. Only 12 percent disagreed. And the proportion uncertain dropped to 12 percent.

Finally, we asked whether a reduction in the inflation rate to the 7-10 percent range might cause people to retire earlier. Only 17 percent of the respondents agreed or strongly agreed with this statement. Fifty percent disagreed and 32 percent were uncertain. In short, a reduction in the inflation rate much below current levels seems unlikely to produce much change.

In summary, inflation has already affected the attitudes of faculty members about their expected age of retirement. A majority, it appears, are likely to delay retirement so as to minimize the rate at which the real value of their retirement benefits will decline.

Further detailed results from the faculty survey will be presented in the final report.

Part V

Footnotes

[1] For a discussion of the preemption issue see Roman-Micek, John J. "The 1967 Age Discrimination in Employment Act and Preemption: A Case for Broader State Laws," University of San Francisco Law Review, Winter 1978: 233-310.

[2] See Section V for a discussion of how actual retirement practices were affected by the AADEA.

[3] There is considerable variation among states in the lower limit of the protected age group. Because protection for employees below 40 (the lower age limit for the group protected by the AADEA) is irrelevant to the legality of a MRA, this variation is not discussed.

[4] L.S.-S.A.-R.S. 23-c.9: Age Discrimination in Employment Act. This exemption in many cases is similar to that provided by the 1976 Age Discrimination in Employment Act. Since most faculty members are covered by pension plans, the removal of the exemption of the 1978 AADEA affected the legal ability of educational institutions in these states to mandatorily retire faculty members at ages below 65 and after that date at less than age 70 until July 1980.

[5] An additional exemption was provided by the AADEA for high policy makers who "for the 2-year period immediately before retirement is employed in a ...high policy-making position, if such employee is entitled to an immediate nonforfeitable annual retirement benefit from...any combination of plans, of the employer of such employee, which equals, in the aggregate, at least $27,000." The effect of this exemption on retirement policies is the subject of another contract awarded by the DOL to Mathematica Policy Research.

[6] U.S. Department of Labor, Age Discrimination in Employment Act of 1967: As Amended, Publication WH-1387 Employment Standards Administration, Wage and Hour Division, Washington, D.C.: USGPO, October 1975.

[7] The potential ambiguity of state laws is demonstrated by the case of Simpson v. providence Washington Insurance Group in which the plaintiff, mandatorily retired at 65, alleged a violation of Alaska's age discrimination statute. The defendant argued that Alaska's statute was preempted by the federal ADEA. (Further discussion of what happened in this case upon appeal.)

[8] Alaska Stat. 18.80.22(a)(1): Mont. Rev. Code Ann. 64-306(1977)

[9] N.J. Rev. Stat. 10-5-4, 10-5-4(a). 10-5-12(a)

[10] California, Connecticut, Florida, Hawaii, Illinois, Iowa, Maine, Maryland, Michigan, Minnesota, Nevada, New Mexico, South Carolina. California changed its protected group from 40-64 to over 40 in 1977. In the same year Michigan changed its protected age group from 18-60 to all adults.

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Footnotes Continued

[11] Colorado (18-60), Georgia (40-65), Kentucky (40-65), New Hampshire (18-65), Ohio (40-65), Rhode Island (45-65), South Dakota (18-65), Utah (40-65), West Virginia (40-65)

[12] Delaware (40-65), Idaho (less than 60), Indiana (less than 65), Nebraska (40-65), New York (18-65), North Dakota (40-65), Oregon (25-65), Pennsylvania (40-62), Texas (21-65), Washington (40-65), Wisconsin (40-65), D.C.(18-65)

[13] Oregon protected private workers aged 25-65 and had a BFRP exemption. Georgia, while it sepcified a BFRP exemption, allowed an employee to waive retirement benefits in order to avoid mandatory retirement. Thus, effectively, it had only a protected age group of 40-65 and no exemption.

[14] South Dakota protected 18-65 year olds without a BFRP exemption. Texas, protecting employees between 21 and 65 years of age, had a BFRP exemption applying specifically to higher education.

[15] California, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa,Louisiana, Maine, Massachusets, Minnesota, Nebraska, New Hampshire, Ohio, Rhode Island, South Carolina, South Dakota, Utah, Oklahoma and Wisconsin issued executive orders.

[16] See fn. 10 for names of states.

[17] See fn. 11 for names of states in this group.

[18] Georgia adopted legislation in 1978 protecting employees 40-65 of state agencies or subdivisions. This statute had a "sunset clause" that repealed itself effective 7/1/80. This brief interlude during which tenured faculty members were covered by federal and state codes against age discrimination is treated as "no change" since during this time as it did before 1978 and does since 7/1/80 the federal AADEA governs the legality of MR policies in state universities and colleges.

[19] Most of the exemptions were granted to employees of higher education in general. Since non-tenured faculty employees could not be retired prior to age 70 under the 1978 AADEA, this more generous exemption at the state level was preempted by the 1978 AADEA's restricting MR for all other employees to age 70 or older. Though not so specifically stated, the state exemption for all employees in education could be applied only to tenured faculty.

PART VI

CONTINUED EXISTENCE OF MANDATORY RETIREMENT RULES, CONSEQUENCES OF MANDATORY RETIREMENT RULES ON LABOR FORCE PARTICIPATION BY OLDER WORKERS, ESTIMATES OF RESPONSE BY OLDER WORKERS TO CHANGE IN THE MANDATORY RETIREMENT AGE

Introduction to Research Findings

An assessment of the feasibility of modifying the present mandatory retirement age requires an understanding of the consequences of mandatory retirement policies for the labor force. To a considerable extent the great majority of current labor force participants have anticipated a retirement age of 65 during most of their working careers. The recent shift of the mandatory retirement age to 70 may result in changing the planned age of retirement for labor force participants. In order to evaluate the feasibility of additional modification of the mandatory retirement age, including its possible elimination, it is essential to document the reasons for the existence of mandatory retirement policies, the effects of the former age 65 criterion and the most recent consequences of an increased mandatory retirement age of 70. This information can then be combined with projections of the probable long term effects of eliminating the mandatory retirement age to provide a more comprehensive basis for recommendations regarding changes in the mandatory retirement age.

1. The Development of Mandatory Retirement Policies

This section summarizes information on the historical development of mandatory retirement policies, employee and employer rationales for mandatory retirement, recent economic explanations of mandatory retirement, consequences of non-neutral pension plans, and the incidence of mandatory retirement rules prior to the 1978 ADEA amendments.

Employer mandatory retirement rules and employer pensions have historically been closely related. Prior to the widespread adoption of formal pension plans during the 1940's, both pensions and mandatory retirement rules were rare. The chief labor benefit for workers between 1900 and 1930 was the reduction in hours of work at younger ages, rather than pension plans. After World War II, reductions in work at older ages surpassed overall reductions in working hours as a major labor supply trend. For example, labor force participation by males aged 65 and over fell from 48 percent in 1947 to 20 percent in 1978.

As the Social Security program developed in the late 1930's, ideas and policies to encourage retirement arose. This led to the development of both compulsory retirement rules and pension plans to help facilitate retirement. One of the clearly understood purposes of OASI when it was enacted in 1935 was to encourage workers to leave the labor force by providing an economic base for retirement. It was argued that this would result in more jobs for younger workers. Thus, the Social Security system has significantly affected retirement age by providing an economic base for retirement and establishing retirement as an appropriate and expected occurrence in old age.

The sharp increase in private pension plans in the 1940's occurred primarily to encourage and speed up retirement by executives. However, partially aided by unions' collective bargaining agreements, this pension coverage gradually spread to the general mass of employees. It became general practice to structure private pensions as supplementary to OASI and OASI's minimum age for receipt of retirement benefits became the actuarial basis of the private plans. It is now generally agreed that the age 65 limit was an arbitrary choice and that once it was selected, the effect of collective bargaining on the presence of mandatory retirement provisions in pension plans has followed no obvious trend. A Department of Labor study in 1957-58 found that one-half of the 100 collective bargaining agreements on pension plans included compulsory retirement provisions. However, other studies found no significant effect of unionization on the presence of mandatory retirement provisions in pension plans.

Historically, union attitudes toward mandatory retirement have been ambivalent, an ambivalence reflective of union attitudes toward older memebers generally. McConnell and Corson (1956) argued that, while seniority systems usually protected the status of the older worker already on the job, up to that time there had been little union-based protection from age discrimination in hiring practices for an older worker outside of that job.

The overall history of union attitudes toward mandatory retirement emphasizes their sensitivity to unemployment. Prior to the 1930's, unions were strongly opposed to compulsory retirement and fought to keep such provisions out of contracts. During the depressed economic conditions of the 1930's, union policy softened considerably to at least tolerate, if not advocate, mandatory retirement provisions. Subsequently, in the late 1940's and early 1950's, union opposition stiffened once again under more favorable economic circumstances. Unions at times even tried to extend the working years of older members, either by increasing mandatory retirement ages or attempting to abolish them altogether.

While unions rarely supported mandatory retirement actively, tacit acceptance seems to have played some role in its continuance, especially when mandatory retirement was part of a pension plan. As has already been noted, mandatory retirement rules have been closely linked to pension systems. Union opposition to compulsory retirement may be primarily related not to compulsion per se but to a reluctance to leave older workers without adequate incomes. As retirement incomes have risen, automatic retirement schemes have also gained in union acceptance.

Rationales explaining the existence of mandatory retirement rules historically came from both employees and employers. Employees reasoned that (1) such rules did increase job or promotional opportunities for younger workers; (2) the retirement process was made easier by having compulsory rules, for it encouraged specific plans and preparation by workers for the financial and psychological transitions of retirement; (3) the rule made it possible to retire in dignity without the stigma of having been found unproductive since a worker did not have to be judged by a performance evaluation (4) since 65 had become socially acceptable as the "natural" boundary between work and retirement, and there were the strong economic incentives of Social Security and employer pension plans, these contributed to an expectation and acceptance of compulsory retirement.

Employers' rationales for the existence of mandatory retirement have focussed on the following issues:

1. a belief that productivity decline was comensurate with increasing age;

2. wage inflexibility created primarily by unions in collective bargaining (work rules, seniority systems, etc.) required the presence of mandatory retirement rules;

3. measuring productivity of individual workers would be too costly - i.e., generalizing about decreased productivity with age is less expensive than individual measurement;

4. the increase in the bureaucratization of large companies necessitates the need for simple, uniform rules governing retirement;

5. mandatory retirement is administratively easier than individual evaluations, and lessens conflicts which may result in appeals, etc. It provides a practical administrative procedure that is objective, impersonal and impartial, thus avoiding charges of discrimination, favoritism or bias;

6. promotional opportunities, employers want to promote younger workers, but are prevented from doing so because of seniority practices.

2. Recent Economic Explanations of Mandatory Retirement

There is another point of view which explains mandatory retirement as a necessary aspect of a long-term relationship between employees and their employer; such rules may ensure the efficient working of the labor market and, from a lifetime viewpoint, both workers and employers may be better off because of such rules.

The basic notion is that workers give up free choice with respect to retirement age in order to enjoy some benefit prior to forced retirement age that would otherwise not be forthcoming. Central to arguments in the literature is the idea that workers freely choose to take (and stay in) jobs that are subject to mandatory retirement. That is, mandatory retirement is a natural consequence of free market contracts mutually beneficial to both employers and employees.

There are two aspects of a job which make a long-term contract advantageous to both employees and employers: the existence of search costs on the part of both parties to match workers with jobs; and a need to finance investment in human capital. Employees are willing to enter a long-term contract, even if it contains mandatory retirement provisions, because there are search and set-up costs in beginning a new job and it is optimal to spread these costs over as long a job tenure as possible.

Employers prefer long-term contracts for much the same reasons. Search and hiring costs are significant, so employers want to ensure a steady work force. Investment in specific human capital paid for the employer requires that workers remain on the job for longer periods of time than would be the case if no investment were made in their training. In addition, long-term contracts in which part of the reward for working is withheld gives the employer some leverage in ensuring satisfactory work by employees.

Theories which stress long-term contracts are less successful in explaining the nearly universal use of 65 as the termination age in such contracts. It may be that firms and workers prefer to minimize the difference between mandatory retirement and voluntary retirement and that costs are associated with a large variety of mandatory retirement ages. Thus, employers tend to choose the age commonly associated with social security and private pension acceptance. More importantly, since such pensions often lose part of their value, if postponed past this age, this effectively reduces the market wage rate and would encourage reduced work regardless of mandatory retirement policy. Nevertheless, it weakens the importance of the long-term contract theories when potential gains from establishing optimal retirement ages for individuals or firms are presumably too small to overcome the disincentives in the Social Security system for work at older ages.

3. Mandatory Retirement Rules and Non-Neutral Pension Plans

Mandatory retirement rules are only one method of ensuring that a worker leaves a job at a given age. The lifting of such rules, while ensuring the worker's right to continue at the same job at older ages, will not ensure that he/she will actually do so because, in addition to forced retirement rules, non-neutral pension plans have been widely used to induce job exit.

Pension plans can and do exert economic pressure on individuals to leave a job or even leave the labor force. Of course, the very existence of a pension which can be taken at a given age will provide workers with the option of leaving their job and accepting benefits at that age. Few would object to this impact of pension plans on work. In fact, it is this aspect of pensions and of Social Security -- ensuring a margin of income replacement for those who retire--which has long won support. Thus, generous pension plans will eliminate to some degree the "need" for mandatory retirement rules. But pension plans have been designed to induce retirement with even greater certainty. If those who continue working were rewarded with increased yearly benefits which fully compensated them for not immediately taking a pension, only individual tastes and preferences would enter into such a choice. This type of pension system would be neutral with respect to the timing of benefits. It would encourage or discourage the acceptance of these benefits and subsequent job separation at any particular age only to the extent that any kind of asset affects such a decision. A pension system is not neutral when the lifetime value of benefits changes with the timing of benefit acceptance. It is this aspect of pensions which greatly facilitates their use as alternative mechanisms for enforcing long-term contracts.

Most pensions decrease in lifetime value when postponed and therefore put economic pressure on workers to quit their jobs and accept a pension. Employers can affect the age of retirement by tilting pension benefits to ensure that the optimal time for acceptance of benefits occurs at the age they desire employees to separate from the firm.

It is likely that non-neutral pension plans have at least as much to do with inducing retirement as mandatory retirement rules. Rather than forcing retirement at a given age, however, non-neutral pension plans achieve their purpose by effectively reducing the net wage rate of older workers who continue on a job.

4. Incidence of Mandatory Retirement Rules Prior to the 1978 ADEA Amendments

Prior to 1978, mandatory retirement rules in industry varied in their incidence across industries. (Table 1) Although 44 percent of workers aged 58 to 61 in 1969 were in jobs with mandatory retirement rules, most were concentrated in communications, petroleum refineries, federal goverment, instruments, and transportation, where four workers in five were subject to mandatory retirement rules. The lowest incidence of workers in industries with mandatory retirement rules were in service industries, sales and appparel where one worker in five was subject to such rules. Industries with the highest incidence of mandatory retirement rules had the highest degree of private pension coverage and coverage by Social Security. Mandatory retirement rules and pension plans were more likely to be in higher wage industries with white collar workers. In addition those industries in which physical demand requirements are important tended not to have mandatory retirement rules.

In summary, the proportion of workers age 58-61 subject to mandatory retirement was only 44 percent in 1969, but this figure varied widely by industry. Sales and services industries applied mandatory retirement to about one in five of these workers, but this incidence rate ranged up to about 80 percent in other industries such as transportation and communications. The degree to which jobs in an industry were subject to mandatory retirement was closely related to the extent of pension coverage and wage levels. The greater the wage rates and the greater the degree of pension coverage in an industry, the more likely that industry's firms used mandatory retirement. Similar relationships were found when jobs were categorized by occupation. White collar workers were more often subject to mandatory retirement than blue collar workers, but highly skilled blue collar workers were more subject to mandatory retirement than low-skilled white collar workers. Mandatory retirement was more prevalent in occupations that are not physically demanding than in those with rigorous physical requirements.

From an analysis of industrial characteristics associated with mandatory retirement rules and pension plans, through looking at the industry rage rates, productivity trends, total number of workers, and the extent to which workers perform whole activities on their jobs, the following pattern appears which gives relative support to the long-term contract theory of mandatory retirement:

1. Pension plans and mandatory retirement rules were likely to occur if the productivity of the industry is high.
2. High wage workers are most likely to face job constraints in old age.
3. Jobs with physical requirements are more likely to have pension coverage, but less likely to have mandatory retirement rules.
4. Although the degree of unionization was highly related to pension coverage, it was not a factor in the incidence of mandatory retirement.

Table 1. Pension Provisions Across Industries for All Workers Aged 58 through 61 and Employed in 1969

	Percent of Workers Aged 58-61		
Industries (Based on first 2 digits of SIC Code) (1)	Subject to Mandatory Retirement At Any Age (Percentage) (2)	Eligible for A Pension At Any Age (Percentage) (3)	Covered by Social Security (Percentage) (4)
Mining	25	75	96
Oil and Gas	21	47	100
Construction	22	54	94
Foods	58	74	100
Textiles	31	53	100
Apparel	12	45	98
Paper	57	86	100
Publishing	32	69	95
Chemicals	74	85	100
Petroleum	90	97	100
Rubber	70	70	100
Leather	26	43	100

Table 1--continued

Industries (Based on first 2 digits of SIC Code) (1)	Percent of Workers Aged 58-61 Subject to Mandatory Retirement At Any Age (Percentage) (2)	Eligible for A Pension At Any Age (Percentage) (3)	Covered by Social Security (Percentage) (4)
Lumber	32	40	96
Furniture	28	47	94
Stone, Clay, Glass	69	83	100
Primary Metals	53	94	99
Fabricated Metals	46	77	98
Machinery	50	76	98
Electrical Machinery	63	76	99
Transportation	80	90	97
Instruments	82	91	100
Miscellaneous	33	48	100
Railroads	50	96	11
Local Trans., Bus	56	67	92

Table 1--continued

	Percent of Workers Aged 58-61		
Industries (Based on first 2 digits of SIC Code) (1)	Subject to Mandatory Retirement At Any Age (Percentage) (2)	Eligible for A Pension At Any Age (Percentage) (3)	Covered by Social Security (Percentage) (4)
Motor Freight	32	83	95
Water and Air and Pipeline Trans.	48	92	100
Communication	92	96	100
Utilities Sanitation	70	91	89
Wholesale Sales	13	50	99
Retail Sales	18	31	95
Finance	55	80	96
Insurance	41	56	94
Business Services	29	57	87
Repair Services	4	35	100
Personal Services	4	15	78
Medical Services	24	43	82

Table 1--continued

	Percent of Workers Aged 58-61		
Industries (Based on first 2 digits of SIC Code) (1)	Subject to Mandatory Retirement At Any Age (Percentage) (2)	Eligible for A Pension At Any Age (Percentage) (3)	Covered by Social Security (Percentage) (4)
Hospital	46	68	88
Education	75	83	82
Welfare, Religious	13	50	77
Other Services	12	50	88
Federal Govt.	86	95	40
State Govt.	77	87	80
Local Govt.	59	85	86
Average	44	64	89

Source: Social Security Administration Retirement History Survey (1969-1975)

[a] except oil and gas

[b] less than 20 observations

[c] except electrical

The Consequences of Mandatory Retirement on Older Worker Labor Force Participation

This section presents an analysis of the labor market effects on older workers of raising the mandatory retirement age limit. Two types of analysis are reported: (a) an examination of the effects of raising the mandatory retirement age, availability of pension benefits and other variables on the retirement decisions of workers who were subject to the former mandatory retirement age of 65; and (b) a review of estimates of overall labor supply effects of raising the mandatory retirement age based on the above analysis and other major estimates.

a. Effects of mandatory retirement rules on older worker labor supply

Estimates of retirement behavior were derived from data in the Social Security Administration Retirement History Survey, a 10-year logitudinal study by the Social Security Administration of a national sample of older workers approaching retirement age. A major research effort was undertaken to develop from survey responses, reliable estimates of social security and pension benefit amounts and the wealth such benefits represent and to combine these data with information on mandatory retirement effects in order to predict retirement behavior.

The basic approach was to estimate, over two-year intervals, the probabilities that employed workers would remain in the same job, move to a new job or leave the workforce altogether. Separate estimates were made by sex, by employed vs. self-employed status (for men only), and by age group (58-61, 62-64, 65-67). Regression analysis was applied to a series of variables for those respondents who were not subject to mandatory retirement during the two-year intervals. By then applying the resulting predictive equations to respondents who were subject to mandatory retirement, and by comparing predicted with actual labor force transitions for these people, upper limits were derived for the marginal impact mandatory retirement alone may have had on these transitions.

The explanatory variables used in the job transition equations include the following:

- Indices of eligibility for a full pension or a reduced pension during the transition periods;
- Wealth measures for lifetime pension and Social Security rights;

- Estimates of the net costs in terms of foregone benefits of a one-year delay in acceptance of a pension and of Social Security;
- Indices for the presence of a mandatory retirement constraint occuring after the two-year transition interval;
- Marital status;
- Indices for health limitations and evidence of deteriorating health; and
- Market wage rates.

b. Major Conclusions of Labor Supply Research

Our study has found that the prior existence of age-65 mandatory retirement rules had a significant impact on the likelihood that workers reaching that age would withdraw from the labor force. For example, men aged 62-64 who were wage or salary workers in 1973 had their probability of continuing to work at any job over a two-year period diminished by about 28 percentage points due to facing an age-65 mandatory retirement rule. A less significant but discernible effect was found on the employment behavior of younger workers. Women age 58-61, for instance, were estimated to have a decline in their probability of continued work of about 8 percentage points associated with the prospects of the future imposition of mandatory retirement by their employers.

Had the 1978 ADEA Amendments become effective during the period analyzed in this study (1973-1975), the result of raising the mandatory retirement age from 65 to 70 would have been that at most 200,000 older workers would have been working in 1975 instead of retired. Such a result is, of course, of great significance to individual workers approaching age 65 who want to continue working and are unlikely to have much opportunity at that age to move to other jobs. This increase is less important in that it represents a measurable increment to the total number of such workers; for example, this maximum figure (200,000) implies a 3-percent increase for men aged 64-66 in 1975. However, viewed in the context of the national economy, this change in labor supply would be a miniscule increase in the total workforce (less than two-tenths of one percent).

This study also estimates the relative importance of Social Security and pension benefit entitlements to the retirement decision, both in terms of the current year tradeoff (loss of a year's wages vs. loss of retirement benefits) and the wealth effect (the present asset value of a lifetime of future benefits). The current trade-off of benefits vs. wages was found to be especially important, reflecting the fact that Social Security and the bulk of pension plans are designed to encourage retirement.

Several other significant factors in the retirement decision were also identified -- health status and wage rates proving to be especially important determinants of individuals' behavior.

Since mandatory retirement provisions are closely tied to private pensions, this research indicates that the incentives inherent in pension plans are important determinants of behavior (people do respond to these incentives) and therefore that the eventual impact of changes in mandatory retirement legislation depends critically on how pension characteristics change. If employers cannot dismiss employees at age 65 on the basis of age but are permitted to structure fringe benefits to make it very expensive for workers to continue working beyond a particular point, changes in mandatory retirement rules will have only a modest aggregate impact. On the other hand, if employers were to remove these financial discentives to work, the impact of the ADEA Amendments will be more pronounced.

c. Selected Analytical Results

The most important of our results apply to persons aged 62-64. This age group is the one most likely to encounter a mandatory retirement constraint during the two-year retirement transition period, since most of them reach age 65 by the period's end. For men not self-employed, the impact of mandatory retirement was estimated to have reduced the probability of staying on the same job by as much as 30 percentage points, from .41 to .11. (This probability was .51 for those not subject to mandatory retiremeмt.) Labor force withdrawal, rather than job changes, accounted for the preponderance of job transitions (more than 9 out of 10 of the job leavers in the mandatory retirement group, about 8 out of 10 of the other job leavers). Persons facing mandatory retirement after the two-year transition period were found to be slightly more likely to leave their jobs than those not subject to mandatory retirement at all.

For men aged 62-64 job leaving was found to be more likely the greater the net annual cost of delaying pension acceptance. The corresponding measure for delay of Social Security benefits also proved to be significant in explaining work behavior. The wealth measures for future pension and Social Security benefits were positively related to the likelihood of job leaving, but the relationshps were weaker than for the cost of pension delay. The likelihood of staying in the same job increased, the higher the wage rate and the better the health status of the worker.

For non-married women aged 62-64, mandatory retirement could explain as much as a 34 percentage point decline in the probability of staying in the same job, from .43 to .09. (The probability was .60 for women not subject to mandatory retirement.) Women appeared to be more sensitive than men to losses in pension benefits incurred by continued work, and more likely to react to the penalties by leaving their jobs and withdrawing from the labor force.

An important by-product of our research is the detailed data that were developed on pension benefits. The next section presents information on: (1) the combined incidence of mandatory retirement and pension coverage by industry; (2) the distribution of pension benefits by benefit amount; and (3) the distribution of pension wealth.

d. Pension Plans and Their Relationship to Mandatory Retirement Rules

The study of the labor force effects of mandatory retirement attempted to separate out the effects of pension plans on retirement behavior since employees are often faced with both types of incentives. From an economic viewpoint, the presence of mandatory retirement alters the potential stream of future earnings by compelling an older worker to retire at a certain age or to seek another job, perhaps at a lower wage. Employer pensions and Social Security also introduce economic retirement incentives. First, pension eligibility brings with it a possible source of non-wage income, thereby reducing the economic need to continue working. Second, Social Security and a large number of pension plans are designed such that postponement of benefit acceptance (i.e., delay of retirement by a pension eligible) will result in a permanent loss of benefits that is greater than any increase in future benefits that may result from the additional period spent working, although income from work would of course continue. To understand the importance of mandatory retirement rules required an assessment of the impact these other incentives have on retirement behavior.

Mandatory retirement constituted a constraint on the jobs of 43 percent of workers aged 58-61 and 34 percent of those aged 62-64 in this study. The data indicated a high degree of pension eligibility for those aged 62-64 subject to mandatory retirement. Of those aged 62-64 subject to mandatory retirement, all but 10 percent would eventually be pension eligibiles, whereas 59 percent of those not subject were not entitled to pensions. This reflects the close relationship identified earlier between mandatory retirement provisions and private pension coverage.

Mandatory retirement rules curtail an individual worker's ability to choose when to leave a job. The lifting of such rules, while broadening workers' rights, will not ensure that they actually stay in their jobs. The timing of retirement from a particular job or from all market work will vary across individuals due to different tastes and attitudes about work as well as differing health conditions and family responsibilities. Economic variables which make the choices between continued work or retirement more or less appealing are, of course, important factors in the retirement process.

Pension plans can and do exert economic pressure on individuals to leave jobs or even leave the labor force. The very existence of a pension which can be taken at a give age will, of course, provide a worker with the options of leaving a job and accepting benefits at that age. If those who continued working were rewarded with increased yearly pension benefiuts which fully compensated them for not immediately taking pensions, only individual tastes and preferences would enter into the retirement age choice. This type of pension system would be neutral with respect to the timing of benefits. It would neither encourage nor discourage the acceptance of these benefits at any partricular age any more than any asset affects such a decision. However, as already mentioned a pension system is not neutral when the value of benefits changes with the timing of benefit acceptance. Most pension plans require a worker to leave the job in order to collect benefits, and the lifetime expected value of total benefits usually falls when postponed past some age. Even for those not facing mandatory retirement, such pension plans encourage retirement by a certain age. Social Security puts no restrictions on work at a given job but decreases the benefits of those whose earnings exceed an exempt amount. Moreover, the present value of the lifetime stream of Social Security benefits also falls if acceptance is postponed past a given age for most workers. For this reason, Social Security also encourages less work effort than would be the case in the absence of such work disincentives.

Mandatory retirement rules obviously affect job separation directly by requiring workers to leave their jobs at a specific age. But such rules may also have an effect on job separation prior to the actual age at which they apply by distorting the expected future stream of earnings that might otherwise be available. This possibility of lower future earnings adds to the early retirement incentives established by many pension plans and Social Security.

e. The Incidence of Mandatory Retirement Rules and Their Relationship to Labor Supply

Table 2 shows the incidence of mandatory retirement rules across older workers by age, sex and time period for which mandatory retirement was applicable. For those aged 58 to 61 in 1969, less than one percent actually faced mandatory retirement on their current jobs by 1971. Over 40 percent, however were in jobs in which there was some mandatory retirement rule in effect. Men were much more likely to be in jobs with mandatory retirement rules than women. However, for over one-half of the men and two-thirds of the women in this sample, mandatory retirement would never be a constraint on their current jobs.

This finding is similar to that found by Halpern (1978) using data from the National Longitudinal Survey (1970) and by Clark, Barker, and Cantrell (1979) using a sample of workers at all ages from the RHS (1971). (See Table 3.) However, no direct comparison can be made between these incidence tables and the data in this report since somewhat different age groups have been used. In general, it can be assumed that approximately 40-50 percent of all workers faced a mandatory retirement age (usually 65) prior to the ADEA Amendments of 1978.

For those aged 58 to 61, the imposition of mandatory retirement over the next two years was not an immediate problem. But that was not the case for the second cohort of workers investigated, those aged 62 to 64 in 1973. By 1974, 14 percent of these workers would reach a mandatory retirement age on their jobs. Another 20 percent would be subject to such a rule at later ages. The final cohort of workers consists of those respondents aged 65 to 67 in 1973 who were still employed. For these workers, mandatory retirement was less likely; only 5 percent would reach mandatory retirement on their jobs in the next two years and 10 percent at a later time. The most likely reason for mandatory retirement not being a significant future constraint for this age group of workers was that they were the employed remainder of an age cohort that had already faced mandatory retirement rules at younger ages.

Table 4 shows the labor supply behavior two years later for these three age-cohorts of workers. The major changes in the labor supply occurred, not surprisingly, among those workers who faced mandatory retirement in their jobs during the two-year transition period. For example, in the sample of workers aged 62 to 64, over half were working two years later. In the subsample facing immediate mandatory retirement, only 17 percent remained in the labor force. For those aged 65 to 67, the analogous figures are 62 and 26 percent. Such findings leave little doubt that there is a strong correlation between a

Table 2. Scope of Mandatory Retirement Provisions For Respondents Employed In Initial Period

Initial Age	Subject to Mandatory Retirement Rules: During the two-year period [d]		Later		Never		Total Population
	individuals	row percentage	individuals	row percentage	individuals	row percentage	
58-61[a]							
Total	15	(*)	1,460	43	1,906	56	3,381
Male	14	(*)	1,202	46	1,410	54	2,626
Female	1	(*)	258	34	496	66	755
62-64[b]							
Total	217	14	317	20	1,007	66	1,541
Male	173	15	264	22	754	63	1,191
Female	44	13	53	15	253	72	350
65-67[c]							
Total	38	5	76	10	652	85	766
Male	29	5	56	10	465	85	550
Female	9	4	20	9	187	87	216

Source: Retirement History Survey (1969 through 1975)

*Less than one percent.

[a] Respondents employed and aged 58 through 61 in 1969.

[b] Respondents employed and aged 62 through 64 in 1973.

[c] Respondents employed and aged 65 through 67 in 1973.

[d] 1969-71 for those age 58-61; 1973-75 for the other age groups.

Table 3. Previous Studies of the Incidence of Mandatory Retirement Provisions

Study	Mandatory Retirement	
	Yes	No
Halpern		
Male Wage Earners (1971)	48.7	50
Clark		
All Wage Earners (1971)	36.9	62.0
Male Wage Earners (1971)	40.6	58.7

Source: Clark, Barker, Cantrell (1979)

Table 4. Labor Force Participation Rates at the End of the Transition Period by Initial Age and Mandatory Retirement Provision (labor force participation is 100 percent in initial period)
Labor Force Participation Rates (percent)

Initial Age	Subject to Mandatory Retirement Rules: During the Two Year Period	Later	Never	Total Population
58-61				
Total	a	85.3	89.0	87.4
Male	a	85.7	89.4	87.6
Female	a	83.3	89.5	87.4
62-64				
Total	17.1	55.5	59.8	52.9
Male	16.8	54.9	58.1	51.4
Female	18.2	58.5	64.8	58.0
65-67				
Total	26.3[b]	48.7	65.2	61.6
Male	24.1[b]	55.4	64.1	61.1
Female	a	30.0[b]	67.9	63.0

Source: Retirement History Survey (1969 through 1975).

[a] Based on fewer than 20 observations.

[b] Based on 20 to 50 observations.

mandatory retirement age and a decline in work.

Those subject to mandatory retirement but not during the transition period had work behavior similar to those not subject to mandatory retirement at all.

f. The Interaction of the Labor Supply Impacts of Mandatory Retirement and Pension Provisions

It is apparent that the incidence of mandatory retirement rules during the transition period was most important for workers initially aged 62 through 64. The fact that only 17 percent of such workers remained in the work force suggests that mandatory retirement rules are important. But as Table 5 indicates, such rules were only one aspect of the retirement system which had a major impact during this transition period.

As can be seen from Table 5, of the 217 respondents aged 62 to 64 in 1 73 who would be subject to a mandatory retirement rule by 1975, nearly three out of four were also eligible to collect a pension during those two years, and most were eligible for full benefits. Only 9 percent would never be eligible for any pension benefits. Of those subject to mandatory retirement at a later age, nine in ten were also eligible for pension benefits, either during the transition period (55 percent) or later. Of all the workers subject to mandatory retirement rules either during the transition or at a later time, only 10 percent were not eligible for pension benefits.

These pension eligibility rates are in sharp contrast to those for workers not subject to mandatory retirement rules. While 40 percent of the latter group were eligible to receive private pensions, 60 percent had no private pension coverage. There was clearly a strong correlation between mandatory retirement rules and pension plans, not only with respect to coverage but with respect to the age at which they both become effective. The vast majority of workers, both male and female, who were subject to a mandatory retirement age were also eligible to receive pension benefits at that age. Although the chance of facing a mandatory retirement age without being eligible for pension benefits was higher for women, it was still less than 20 percent.

While it is true [illegible]t more workers were eligible to receive pension benefits without being subject to mandatory retirement rules than vice versa, nevertheless, of the 359 workers eligible to receive full pension benefits over the two-year period, over 40 percent were also subject to mandatory retirement provision during that time, and 25 percent more

Table 5. Relationship Between Mandatory Retirement Provisions and Eligibility For Pension Benefits For Respondents Aged 62 to 64 and Employed in The Initial Period

Subject To Mandatory Retirement Rules	Eligible To Collect Pension Benefits								Total Population
	During the Two Year Period				Later		Never		
	Reduced Benefits		Full Benefits						
	individuals	row percentage	individuals	row percentage	individuals	row percentage	individuals	row percentage	
During Next Two Years									
Total	18	8	144	66	35	16	20	9	217
Male	15	9	117	68	30	17	11	6	173
Female	3	7	27	61	5	11	9	21	44
Later									
Total	82	26	91	29	108	34	36	11	317
Male	67	25	76	29	92	35	29	11	264
[illegible]male	15	28	15	28	16	30	7	13	53
Never									
Total	62	6	124	12	225	22	596	59	1,007
Male	59	8	107	14	190	25	398	53	754
Female	3	1	17	7	35	14	198	78	253
Total Population									
Total	162	11	359	23	368	24	652	42	1,541
Male	141	12	300	25	312	26	438	37	1,191
Female	21	6	59	17	56	16	218	62	350

Source: Retirement History Survey (1969 through 1973) faced such a rule later. Thus, the impact of either retirement rules or pensions should not be considered without explicitly taking into account the importance of the other.

The impact of both of these potential inducements to separate from a job or leave the labor force can be seen quite clearly in Table 6. Two out of every three workers remained in the labor force over the transition period if they were neither eligible to collect pension benefits nor subject to a mandatory retirement provision on their current jobs. This result is in sharp contrast with the one worker in ten who remained in the labor force among those both eligible to collect a full pension benefit and subject to a mandatory retirement age during the transition period. The combined impact of pensions and mandatory retirement almost completely drove workers out of the labor force. Taken individually, both factors are also important. For instance, of those who reached mandatory retirement age but were never eligible to receive a pension, labor force participation is only 55 percent. With respect to the impact of pensions alone, those never subject to mandatory retirement but who were able to collect reduced pension benefits had a labor force participation rate of only 45 percent. (For those who could collect full benefits, this rate fell to 30 percent.) In the absence of mandatory retirement and eligibility to collect a pension, only three workers in ten left the labor force over the transition period.

Another insight from Table 6 is that pension plans may have pre-empted the impact of mandatory rules for workers. The highest labor force participation rate (73 percent) was registered for those subject to mandatory retirement later but not yet eligible to collect a pension. The rate was only 33 percent for those eventually subject to mandatory retirement but currently eligible for full pension benefits.

Most pension plans require a worker to leave the job in order to collect benefits. If the wealth value of the pension does not change when it is postponed (i.e., if future benefits are adjusted to leave the worker neutral with respect to age of pension acceptance), then only the normal pension wealth or pension income effect woudl increase the likelihood of job separation. In other words, if workers who choose not to take benefits in the period are fully compensated by larger future yearly benefits, then the present discounted value of the pension remains the same. (Such pensions are referred to as age-neutral.) A pension is considered age-neutral over a given period if the difference (DELTA) between its wealth value at the beginning of the period and the end of the period is zero. A positive DELTA value indicates that pension wealth falls when acceptance is postponed.

Table 6. Labor Force Participation Rates at the End of the Transition Period For Employed Respondents Aged 62 to 64 by Mandatory Retirement Provisions and Pension Arrangements (labor force participation is 100 percent in the initial period)

	Labor Force Participation Rates (percent)				
	Eligible to Collect Private Pension Benefits				
	During the Two-Year Period				
Subject to Mandatory Retirement Rules	Reduced Benefits	Full Benefits	Later	Never	Total Population
During Next Two Years					
Total	a	9.7	31.4[b]	55.0[b]	17.1
Male	a	8.5	33.3[b]	a	16.8
Female	a	14.8[b]	a	a	18.2[b]
Later					
Total	51.2	33.0	73.1	69.4[b]	55.5
Male	50.7	34.2	71.7	65.5[b]	54.9
Female	a	a	a	a	58.5
Never					
Total	45.2	29.8	62.7	66.4	59.8
Male	44.1	29.0	64.2	65.1	58.1
Female	a	a	54.3[b]	69.2	64.8
Total Population					
Total	48.5	22.5	62.8	66.3	
Male	43.5	22.3	63.5	65.3	
Female	47.6[b]	23.7	58.9	68.2	

Source: Retirement History Survey (1969 through 1975)

[a] Based on fewer than 20 observations.

[b] Based on 20 to 50 observations.

Consider a case in which a worker is eligible to receive a $5,000 pension benefit this year but stays on the job. If this worker retires next year and still only gets benefits of $5,000, the loss in pension wealth (DELTA) is the $5,000 given up to stay on the job. However, if that worker could receive higher benefits, say $5,200, upon retirement next year, part of the initial $5,000 loss would be made up, and DELTA would be less than $5,000. The crucial factor is the extent that future benefits will be increased at later ages for those not accepting benefits in the current period.

A pension with a positive DELTA (change in wealth value) is not neutral with respect to the age of its acceptance. Pension provisions of this type most certainly will have a significant impact on the timing of pension acceptance, job separation, and exit from the labor market. An understanding of the impact of such pension provisions leads to the conclusion that non-neutral pension plans may be a real alternative to mandatory retirement rules in inducing workers to leave a job at a specific age.

Table 7 provides data on the magnitude of these pension asset and DELTA values. The table shows that those subject to mandatory retirement during the transition but also eligible for a pension (75 percent of all such workers) face an additional inducement to leave the labor force in the form of a positive DELTA. The mean loss in pension wealth to remain on the job another year is $2,782. That is, pension wealth on average falls by $2,782 per year if they do not take thier pensions during the year and, of course, leave their jobs. Which one of these inducements (mandatory retirement or a decline in pension wealth) is more important cannot be seen from this table. These data suggest that mandatory retirement and non-neutral pension plans are partial substitutes for one another.

For this age group, the average Social Security DELTA is about the same size as that of a pension. For the mean respondent, the benefits lost, however, are a much smaller (5 percent) percentage of this type of wealth since social security wealth is over twice that of pension wealth. A major reason for the large wealth value of Social Security is the inflation protection it provides. For average wage earners ($4.82 per hour) in this sample of workers eligible for both a pension and full Social Security benefits over the transition period, pension wealth equalled slightly more than two years' salary and Social Security wealth amounted to more than five years of fulltime wages. The pension and social security DELTA values for that same average workers each equalled about 30 percent of full-time mean wage earnings. Pension and Social Security

Table 7. Relationship Between Pension Benefits and Mandatory Retirement Provisions For Those Eligible For a Pension During the Two-Year Period, Respondents Initially Aged 63 to 64 in 1973

Subject to Mandatory Retirement During the Next Two Years	Mean of Change in Pension Wealth If Postponed One Year (DELTA)	Mean Pension Wealth[a] (r = .1)	Mean of Change In OASI Wealth If Postponed One Year (DELTA)	Mean OASI Wealth[b] (r = .05)	Mean Hourly Wage Rate	Total Population
Yes	$2,782	$19,647	$2,943	$31,945	$4.82	162
No	$3,006	$21,670	$2,453	$46,244	$4.77	202

Source: Retirement History Survey (1969 through 1975)

[a] The discount rate (r) used to value future pension benefits is 10 percent. See Appendix B for a discussion of the algorithms used in the estimate.

[b] The discount rate (r) used to value future OASI benefits is 5 percent. See Appendix B.

wealth form a major portion of the asset holdings of older workers, and both the size of this wealth and changes in its value when acceptance is postponed are substantial.

g. The Relationship Between Wage Earnings and Pension Benefits

Those faced with a loss in pension or Social Security wealth if they continue to work must balance this loss against a potential fall in wage earnings following a job change. The economic incentives to remain on the job, separate from the job, or leave the work force are encompased in this tradeoff between potential wage earnings and pension benefits. Those forced to leave their jobs because of mandatory retirement rules, of course, have their choice distorted, but removal of such rules would not ensure that the choice would be continued work.

Table 8 shows that relationship between potential wage and salary easrnings, measured as earnings for a respondent working 2,000 hours, and the change in pension benefits for eligible workers.

Within this cohort, the percentage eligible for a pension increased with wage income. Over the two-year transition period, one person in three was eligible to receive pension benefits. The mean values for these benefits ranged from a low of $2,170 for those with potential earnings of less than $5,000 to a high of $6,477 for those in the $10,000 to $20,000 earnings category.

Table 9, using the same age cohort, shows the relationship between wage and salary levels and Social Security DELTA. Eligibility for immediate benefits was nearly universal. Over 94 percent of these respondents could collect benefits over the transition period. Social Security does increase yearly benefits to those who postpone acceptance past age 62. Between ages 62 and 65, benefits increase by at least 6.67 percent due to an acturarial adjustment. Because workers who remain on a job continue to contribute into the system, benefits may increase further. If the marginal return to additional contributions exceeds a normal market return, DELTA is reduced further. Past age 65, however, the actuarial adjustment falls to 1 percent per year. (This factor will change to 3 percent in 1982.) Therefore, although the wealth value of Social Security may rise for some individuals between ages 62 and 65 (DELTA is negatyive), it will fall for the vast majority after age 65 (DELTA is positive).

Table 8. Relationship Between Potential Wage Earnings and Changes in Pension Wealth (Male Workers, Aged 62 to 64 in 1973)

Potential Wage and Salary Earnings (dollars)	Ever Eligible To Collect Pension Benefits (percentage)	Eligible to Receive Pension Benefits During the Next Two Years (percentage)	Mean One-Year Loss in Pension Wealth for Those Eligible to Collect Pension Benefits in Next Two Years (DELTA) (dollars)	Yearly Loss in Pension Wealth if Postponed (percentage)					
				$0 to 1000	$1001 to 2000	$2001 to 3000	$3001 to 4000	$4001 to 5000	$5001 and over
0 to 5,000	22.6[b]	6.5[b]	2,170[b]	*	*	*	*	*	*
5,000 to 10,000	58.4	31.7	2,196	24	33	22	10[b]	5[a]	6[a]
10,000 to 15,000	78.4	55.1	3,654	14[a]	17[b]	24[b]	17[b]	8[a]	20[b]
15,000 to 20,000	79.3	50	6,477	*	*	*	*	*	66[a]
20,000 and over	*	*	*	*	*	*	*	*	*
Total Population	63.0	37.1	3,033	19	27	21	11	6[b]	15

Source: Retirement History Survey (1969 through 1975)

*Fewer than 10 observations

[a] 10 to 20 observations

[b] 20 to 50 observations

Table 9. Relationship Between Potential Wage Earnings and Changes in Social Security Wealth (Male Workers, Aged 62 to 64 in 1973)

Potential Wage and Salary Earnings (dollars)	Eligible to Collect Social Security Benefits During Next Two Years (percentage)	Mean One Year Loss In Social Security Wealth for Those Eligible to Collect During Next Two Years (DELTA) (dollars)	Total Population (column percentage)
0 to 5,000	96.8[b]	1,397[b]	2.6
5,000 to 10,000	95.5	1,901	70.9
10,000 to 15,000	90.2	2,325	20.4
15,000 to 20,000	89.7	1,932	4.8
20,000 and over	100.0[a]	2,274[a]	1.3[a]
Total Population	94.2	1,975	100.0

Source: Retirement History Survey (1969 through 1975)

[a] Based on fewer than 20 observations.

[b] Based on 20 to 50 observations.

Labor Supply Impact of Pension Systems

The 1978 Amendments to the Age Discrimination in Employment Act abolished the right of a firm to impose mandatory retirement on its employees solely on the basis of age prior to age 70. Thus, for workers once forced to leave a job at age 65, this change in the law provides the option of continued work in that job. But as has been shown, mandatory retirement rules are strongly correlated with pension plans. The terms of these plans can have an important impact on the decision of workers either to leave a job or to exit from the labor force completely. Because mandatory retirement is only one part of a broader pension system, it is a constraint to employment only to the degree that workers would have continued at that job in its absence. Therefore, a more comprehensive model of work behavior is necessary to isolate the marginal impact of changes in mandatory retirement rules.

The ideal method of mesuring the impact of such change would be through a controlled social experiment in which a representative sample of workers would be divided randomly between a "treatment" group and a "control" group. Since no such data exists, the best alternative -- the Social Security Administration Longitudinal Retirement History Survey (RHS) was used. A model was developed which predicts the probability of job separation and movement out of the labor force for workers not subject to a mandatory retirement rule during the survey period. The estimates are then used to predict the labor supply behavior for workers who are subject to mandatory retirement during the same period.

Mandatory retirement rules and pensions most directly affect job separation and only indirectly affect hours of work. For this reason, this labor supply model concentrates on predicting discrete changes in a worker's behavior -- i.e., the probaility that a worker will remain on the job, take a new job, or leave the labor force in a give period. Such a model misses the indirect impact that pensions or mandatory retirement rules have on changes in actual hours worked, either on a current job or in a new job, but it does capture their major direct effects. While acceptance of pensions is almost always contingent on job separation, this is not the case with Social Security benefits. Yet for most workers wishing to reduce wage earnings in an attempt to increase social security benefits, job separation is the most likely route.

i. Data

This research is based on the Retirement History Survey (RHS), a 10-year longitudinal study of the retirement process by the Social Security Administration. The RHS began with a sample of 11,153 men and non-married women aged 58-63 in 1969, who were then re-interviewed at 2-year intervals through 1977. At this time, 4 waves of data are available (1969, 1971, 1973 and 1975). There is attrition at the time of each re-interview because respondents have died, been institutionalized, disappeared or refused to respond. This study is based on the 8,682 respondents for whom data from the first 4 waves were obtained.

The Social Security Administration has appended to the RHS the earnings records of all those covered by Social Security. These contain quarterly amounts of earnings in covered employment up to the taxable maximum from 1951 through 1974 and summary data for the years prior to 1951. These data were used to calculate the Social Security benefits for which the respondents would be eligible under alternative assumptions.

The variables analyzed fall into the following categories:

- labor force transtion variables (the dependent variables);
- demographic variables;
- health variables'
- financial or economic variables;
- mandatory retirement variables.

j. Research Findings

1. The Groups Subject to Analysis

With four waves of RHS data, the labor market transitons of employed respondents were studied over two two-year periods, 1969-71 and 1973-75. The methodology consisted of two stages. First those employed individuals who did not face a mandatory retirement constraint during the two-year transition period were isolated and the factors explaining their observed transitions (same job, new job, no job) analyzed. These results were then used to predict transtions for those with mandatory retirement on the basis of their other explanatory variables, and their predicted and observed behavior were compared.

The age disaggregations isolated three different groups with regard to mandatory retirement. Those aged 58 to 61 are not yet eligible for Social Security retirement benefits and are very rarely subject to mandatory retirement. For this reason, there was little to be learned from this sub-sample about the impact of immediate mandatory retirement. However, the anticipatory influence of future constraints was of interest for this group.

Those 65 to 67 are eligible for full social security benefits, and nearly all are beyond the former age of mandatory retirement. Those still employed after 65 are rare and unrepresentative.

The remaining group, those 62 to 64 during the base year (1973), are the most important. Those workers. who were 64 to 66 by 1975, were nearly all eligible for social security benefits during this period. In addition, many were or became eligible for reduced or full pension benefits. They will experience a wide variety of DELTA values, since two thirds of this sub-sample become 65, at which time the DELTA values increase dramatically. (The social security DELTAs increase because the actuarial adjustment drops from about 6 2/3 to 1 percent at age 65; the pension DELTAs increase because it was assumed that no actuarial adjustment was made once eligibility for full benefits is reached.) In addition, this is the group with the largest percentage of workers encountering a mandatory retirement restriction.

2. Summary of Results

The principal findings of this analysis are summarized below.

The determinants of labor force transitions for persons not subject to mandatory retirement during the transition period differed by sex and by age. For men in the youngest cohort (58 to 61 in the base year), health and retirement income eligibility were the most important factors. Both initial health limitations and a deterioration in health over the two years induced men out of the labor force, as did full pension eligibility or the combination of Social Security and either a full or reduced pension. There was some evidence that marital status, job characteristics and local employment conditions were also important. Being married induced men to stay in the labor force, having a job with physical requirements induced them out, and the primary impact of a tight labor market was to permit more job switching than otherwise.

For women aged 58 to 61, the wage rate was significant; those women with higher wages were more likely to continue working. The variables describing pension and Social Security coverage, however, were generally not significant predictors. Deteriorating health, presence of a husband (though only 3 percent were married), and working in a wage or salary job were also important predictors of labor force withdrawals, as was the existence of a mandatory retirement constraint after the transition period. This group was the only one (out of 6) for which a statistically significant anticipatory mandatory retirement effect was found.

In the analysis of men and women aged 62 to 64 in 1973 and 64 to 66 two years later--the groups of primary interest--the financial variables were most important. The DELTA terms, describing the losses in Social Security and pension benefits which would occur during an additional year of work, were highly significant. Men and women were less likely to continue work the larger the pension and Social Security benefits they would have to forego. It was interesting to note that these more sophisticated variables which reflected the size of the benefits were better predictors of behavior than simple dummy variables denoting pension and Social Security eligibility.

In addition, the wage rate was important for men (the higher the wage, the more likely one is to continue to work) as were marital and self-employment status for women. Married women were more likely to retire, and self-employed women were less so. Health and changes in health remained important for both. There was no strong evidence of an anticipatory mandatory retirement effect in either group; a significant relationship between the size of Social Security and pension wealth and labor force withdrawal appeared only for women.

The behavior of the oldest cohorts--those 65 6o 67 and still employed in the base year--was the most difficult to predict. This difficulty was not surprising, since these respondents had largely ignored any retirement incentives which existed at ages 62 and 65. Only a few variables were significant predictors of retirement-- the wage rate and full pension eligibility for men, and full pension eligibility and the pension DELTA for women. Health was generally insignificant as a predictor of work behavior for this age group.

It is difficult to summarize the effects of all these variables on all the groups. At the risk of oversimplification, it could be concluded that health and retirement income eligibility status are the most important predictors of retirement behavior for the youngest group, that the details of the financial incentives dominate for the "normal retirement" (62-65) group, and that the behavior of the late retirees, with the exception of those waiting for full pension eligibility after 65, is the hardest to predict.

The above results of the labor force transition equations are based on the behavior of respondents who were not subject to mandatory retirement during the transition period. The following discussion focusses on those aged 62 to 64 who were subject. Table 10 shows the actual transition behavior of the entire sample between 1973 and 1975. Of those subject to mandatory retirement, 80 percent were out of the labor force by 1975. Of those remaining, 11 percent were still on their 1973 job, and 9 percent had switched jobs. This behavior contrasts strongly with that of workers who were not subject to mandatory retirement by 1975. Of these, only 38 percent moved out of the labor force, 53 percent stayed on the 1973 job, and 9 percent changed jobs. The differences in these numbers represent a potentially large mandatory retirement effect. The percentage moving out of employment differed by 41 percent for men, 43 percent for women, and 42 percent overall when those who were subject to mandatory retirement are compared with those who were not. However, this comparison ignores important differences in other characteristics of these respondents.

Table 11 presents predictions on how those subject to mandatory retirement would have behaved had this constraint not existed but all their other characteristics remained the same. These predictions were derived from the analysis described above by applying results to the mandatory retirement populations. If the predictions which ignore mandatory retirement turn out to be quite close to actual behavior, then there is little room for a mandatory retirement effect, since the actual differences are being explained by these other factors. The larger the gap in predicted vs. actual behavior, the greater the unexplained differential and the larger the potential effect of mandatory retirement.

As is seen in Table 11, differences in other variables explain some, but certainly not all, of the differences between those who were and were not subject to mandatory retirement. For men, half of those who were not subject remained on the same jobs. Of those who were subject, it was predicted that 40.7 percent would remain, but only 11.4 percent did. Taking another view of the same transition, only 39.9 percent of those not facing mandatory retirement left employment by 1975. It was predicted that 53.4 percent of those who did face it would leave, but 81.4 percent actually did. Of the 41.5-point differential in actual behavior (81.4 - 39.9), 14 points (53.4 -39.4) or a third of the total difference, are explained while 28.0 points (81.4 - 53.4) are not.

Table 10. Actual Transition Behavior, 1973-75, Men (Not Self-Employed) and Women Aged 62-64 and Employed in 1973.

	SAMEJOB[a]	NEWJOB[b]	NOJOB[c]	TOTAL
Subject to Mandatory Retirement by 1975				
Men	16 (11.4%)	10 (7.1%)	114 (81.4%)	140
Women	3 (8.8%)	5 (14.7%)	26 (76.5%)	34
Total	19 (10.9%)	15 (8.6%)	140 (80.4%)	174
Not Subject to Mandatory Retirement by 1975				
Men	581 (50.8%)	107 (9.3%)	456 (39.9%)	1144
Women	232 (59.8%)	25 (6.4%)	131 (33.8%)	388
Total	813 (53.1%)	132 (8.6%)	587 (38.3%)	1532
Difference in Percentages				
Men	-39.4%	-2.2%	+41.5%	
Women	-51.0%	+8.3%	+42.7%	
Total	-42.2%	0.0%	+42.1%	

[a] During the subsequent two years, the worker has remained on his/her same job.

[b] During the subsequent two years, the worker has taken a new job.

[c] During the subsequent two years, the worker has completely moved out of employment.

Table 61. Transition Percentages, Actual and Predicted, For Those With and Without Mandatory Retirement, Men and Women Aged 62-64 in 1973.

	SAMEJOB[a]	NEWJOB[b]	NOJOB[c]	N
Men				
Not Subject to MR[d]	50.8%	9.3%	39.9%	1144
Subject to MR - predicted	40.7%	5.9%	53.4%	140
Subject to MR - actual	11.4%	7.1%	81,4%	140
Women				
Not Subject to MR	59.8%	6.4%	33.8%	388
Subject to MR - predicted	43.3%	8.7%	48.0%	34
Subject to MR - actual	8.8%	14.7%	76.5%	34
Total				
Not Subject to MR	53.1%	8.6%	38.3%	1532
Subject to MR - predicted	41,2%	6.4%	52.3%	174
Subject to MR - actual	10.9%	8.6%	80.4%	174

[a] See Table 10.

[b] See Table 10.

[c] See Table 10.

[d] MR - Mandatory Retirement

The results for the smaller sample of women are similar.

In summary, there are large differences in labor force behavior when those who were and were not subject to mandatory retirement are compared. For example, those who did face mandatory retirement were over twice as likely to leave the labor force as those who were not forced to leave. About a third of this difference, however, can be attributed to other factors, such as the different pension incentives which applied. The remainder, about 28 percentage points for both men and women, cannot be so explained and might be attributed to mandatory retirement.

These effects, however, probably represent upper bounds for the impact of mandatory retirement and quite likely overstate its importance for two basic reasons. First, the distribution of workers among jobs with and without mandatory retirement is probably not random but rather is likely to be correlated with unmeasured retirement age preferences. For individuals who prefer to remain working after age 65, a compulsory retirement rule is a serious drawback. It will either result in an involuntary retirement or a job switch at an age where job and career transitions are very difficult. Such individuals might tend to stay away from jobs with this constraint, either by avoiding them completely or by moving out long before the compulsory date arrives. Those who prefer to retire at or before 65, on the other hand, would not view compulsory retirement provisions as a drawback and should be disproportionately represented in such jobs.

The second basic reason why these estimates may be considered upper bounds concerns the nature of the sample studies. Since the methodology concentrates on transitions over time, it starts with a sample of employed workers. Those respondents who were especially sensitive to the Social Security and pension effects have been eliminated, since they have already withdrawn from the labor force by age 62. Compulsory retirement for these individuals is irrelevant. The remaining sample is more likely than average to have ignored these incentives and therefore is more likely than average to encounter, and be influenced by, mandatory retirement.

Little evidence was found of job switching in response to current mandatory retirement. Neither was much evidence found of an anticipatory mandatory retirement effect among men and women aged 62 to 64. It may be that the frequency of this phenomonen is small or that the response happens prior to age 62 when job and career transitions are easier.

6. Application of Results to Estimation of Labor Supply Effects

In the analysis which follows, the effects of changing the mandatory retirement age on the labor force participaton rates of the male aged 62-64 cohort over a two-year transition period are examined. Table 12 compares the actual labor force participation of this cohort in 1975 with the predicted labor force participation if the law had been changed during the transition period.

Only 14.5 percent of the men in this age cohort who were working in 1973 were subject to mandatory retirement during the next two years. Using social security population data, this group was estimated to include 238,000 men. Of this group, only 17 percent (40,000) remained in the labor force in 1975. If the labor force withdrawal not explained by the predictive equations is the result of mandatory retirement, its removal would have increased the labor supply of those who faced mandatory retirement in the transition period by 28 percentage points. Thus, their labor force participation rate would rise to 45 percent (107,000 workers).

This change in the law would have resulted in an estimated additional 67,000 men remaining at work who otherwise would have exited from the labor force. This impact would not be the full initial effect of the law, however, since there might be some anticipatory effect of future mandatory retirement.

As can be seen from row 2 of Table 12, 22 percent of men working in 1973 faced mandatory retirement at some age after the transition period. The behavioral analysis indicates that labor force participation of this group would increase by 2 percentage points if the minimum mandatory retirement age were raised. Thus 7,000 additional workers aged 64 to 66 would have continued in the labor force.

The remaining 63 percent of men working in 1973 were never subject to mandatory retirement on their current jobs, and it was assumed that their labor force participation would not have been affected. It was further assumed that the 735,000 men not working in 1973 would not have been initially affected by the change in law. Therefore, the total initial effect of the change in law on men aged 62 to 64 in 1973 would have been to increase their labor supply by 74,000 workers in 1975.

Of the 1,641,000 men aged 62 to 64 and working in 1973, 843,000 (51 percent) continued to work in 1975. If the mandatory retirement law had been changed in 1973, the estimated additional 74,000 workers would have raised the total working to 917,000 men (8 percent). Overall, that would have increased the 1975 labor force participation rate for men aged 64 to 66 from 38 to 41 percent.

Table 12. Initial Effect of Changing Minimum Mandatory Retirement From Age 65 to 70 on the 1975 Labor Supp., of Men Aged 62 to 64 in 1973 (simulated for the transition period 1973 to 1975)

ubject to ndatory tirement Rules	Mandatory Retirement Status of Working Population (percentage)[f]	Number of Workers Subject to Mandatory Retirement (thousands)[g]	Actual Labor Force Participation Rate in 1975 (percentage)[h]	Number of Workers in the Labor Force in 1975 (thousands)	Labor Force Participation Rate in 1975 given a Minimum Mandatory Retirement Age of 70 (percentage)	Number of Workers in Labor Force in 1975 given a Minimum Mandatory Retirement Age of 70 (thousands)	Change in Number of Workers in the Labor Force (thousands)
Now[a]	14.5	238	16.8	40[k]	44.8[n]	107[p]	67
Later[b]	22.2	364	54.9	200[k]	57.0[n]	207[p]	7
Never[c]	63.3	1,039	58.1	603[k]	58.1	603[p]	0
In bor Force in 1973[d]		1,641	51.4	843[k]	55.9	917[p]	74
Out of bor Force in 1973[e]		735	0.0	0	0.0		
Total pulation		2,376	37.7	2,236[m]	41.0		

a. Subject to a mandatory retirement age on current job during the 1973-1975 transition period.
b. Subject to a mandatory retirement age on current job at some time but not during transition period.
c. Not subject to mandatory retirement age on current job.
d. Working at a job in 1973.
e. Not working at a job in 1973.
f. Based on data from RHS, see Table 1.
g. 2.328 million men aged 62-64 were eligible to receive OASI benefits in 1973 (USDHEW 1976, Table 51). 98 percent of the total male population were so eligible (USDHEW 1976, Table 49). The labor force participation rate for males aged 60-64 in 1973 was 69.1 (USBLS 1974).
h. Based on data from RHS, see Table 3.
k. Column 2 multiplied by column 3.
m. Survivor rate based on life table for males (USDHEW 1975).
n. Based on regression results from Table 16.
p. Column 2 multiplied by column 5.

Table 13[a] Initial Effect of Changing Minimum Mandatory Retirement From Age 65 to 70 on Labor Supply of Older Workers in 1975 (simulated for the transition period 1973 to 1975)

Age in 1975		Men		Women		Net Change in Workers Who Remain in Labor Force in 1975 (thousands)
		Labor Force Participation Rates in 1975 (percentage)	Number of Men in Labor Force in 1975 (thousands)	Labor Force Participation Rates in 1975 (percentage)	Number of Women in Labor Force in 1975 (thousands)	
60 to 63	Minimum Mandatory Retirement Age is 65	71.3	2,403	36.5	1,489	+74
60 to 63	Minimum Mandatory Retirement Age is 70	72.1	2,432	37.6	1,534	
60 to 63	Net Effect	0.8	29	1.1	45	
64 to 66	Minimum Mandatory Retirement Age is 65	37.7	843	20.4	542	+105
64 to 66	Minimum Mandatory Retirement Age is 70	41.0	917	21.6	573	
64 to 66	Net Effect	3.3	74	1.2	31	
67 to 69	Minimum Mandatory Retirement Age is 65	22.5	402	10.4	240	+21
67 to 69	Minimum Mandatory Retirement Age is 70	23.1	413	10.8	250	
67 to 69	Net Effect	0.6	11	0.4	10	
Total Population Age 16 and Over	Minimum Mandatory Retirement Age is 65	80.40	58,984	46.62	37,207	+200
Total Population Age 16 and Over	Minimum Mandatory Retirement Age is 70	80.56	59,098	46.73	37,293	
Total Population Age 16 and Over	Net Effect	0.16	114	0.11	86	

This is a summary table based on information from Tables 17-22

[a] Based on labor force participation data in USBLS (1975).

The same simulation was performed for women aged 62 to 64 in 1975. In this cohort, 31,000 additional women would have continued in the labor force, increasing labor force participation rates in 1975 from 20 to 22 percent. Of course, the RHS sample is not a representative sample of all older working women. Because the initial RHS sample contained only single women, it is likely that labor force participation rates in 1975 for those employed in 1973 produce an overestimate of the population of working women, which is another source of bias tending to overestimate the effect of changing the mandatory retirement age law.

Overall, the estimated initial effect of increasing the minimum mandatory retirement age from 65 to 70 for those aged 58 to 67 in 1973 would have been an increase in the labor force participation of this group in 1975 by 114,000 men and 86,000 women. That is, 200,000 workers would have continued in the labor force who otherwise would have left their jobs because of mandatory retirement. (Table 13) The greatest effect would have been on men and women aged 62 to 64 in 1973. They would have increased their labor force participation rates by 3.3 and 1.2 percentage points, respectively. For the most part, these are workers who would have continued in jobs they would otherwise have been forced to leave. The second most important effect is on women aged 58 to 61 in 1973. Their labor force participation in 1975 would have increased by 1.1 percentage points (45,000 jobs). This increase would have been due primarily to reducing the impact of anticipated mandatory retirement at a future point. Only in this cohort was this anticipatory effect significant.

These estimates should not cause great concern regarding the potential effect of increasing the mandatory retirement age on job displacement or career retardation of younger workers. The estimate of 200,000 additional workers due to the change in law would have resulted in increases of 0.16 percentage points in the male labor force participation rate and 0.11 percent in the female rate. Such changes would be smaller in magnitude than those caused by the seasonal movement of students into and out of the labor force. They would be totally swamped by business cycle changes.

The change in the law should increase the labor force participation rates of older workers directly by allowing workers to remain on jobs they otherwise would have been forced to leave. In addition, the new law should increase labor supply indirectly by reducing the number of workers who leave in anticipation of a mandatory retirement age. The estimated initial effect is that at most 5 percent (200,000 workers in 1975) would continue working who otherwise would have left the labor force. It is expected that other factors, especially pension and Social Security systems, would be likely to continue inducing the majority of older workers to leave the labor force before the mandatory age. While the change in the law will certainly have some measurable effect, and the effect will be quite significant for the lives of the particular individuals affected, when considered in the context of the entire economy, the overall impact appears likely to be small, on the basis of this research.

Other Estimates of the Responses of Older Workers to the Change in Mandatory Retirement Age

1. Economic Studies

The Department of Labor Estimate. Some of the earliest and most frequently cited estimates of the number of older workers projected to remain on their jobs in response to the change in mandatory retirement age were made by the U. S. Department of Labor. The Department estimated that between 150,000 to 200,000 workers aged 65 to 69 were not in the 1976 labor force because of enforced mandatory retirement. The smaller estimate was based on Current Population Survey (CPS) data relating to persons who want jobs but are not in the labor force. The larger estimate was based on responses of mandatory retirees surveyed as part of the Social Security Administration's Survey of Newly Entitled Beneficiaries (SNEB). Both estimates attempted to identify three groups of workers dissatisfied with mandatory retirement provisions: (1) workers out of the labor force who say they would work in the absence of mandatory retirement; (2) workers unemployed because of mandatory retirement provisions; and (3) workers working part time rather than full time because of mandatory retirement provisions. Once these workers were identified, estimates were made of the number that would continue to work if the mandatory retirement age were changed from 65 to 70.

Halpern's Estimate. Halpern (1978) suggests that the short- and long-run effects of raising the mandatory retirement age may be quite different. Her estimate of the short-run effect is based on data from the National Longitudinal (Parnes) Survey and SNEB and assumes that the structure of the Social Security program will not change. Using the 1971 interview from the Parnes Survey, she estimates that about 8 percent of the sample (men aged 49 to 59 in 1966) would be forced to retire earlier than they desired under a mandatory retirement age of 65. Data from the 1969 SNEB indicate that 9 percent of the sample were mandatorily retired and would have continued to work in the absence of a mandatory retirement age. Data from the 1968 SNEB, originally analyzed by Schulz (1976), indicate that 5 percent of the sample was retired unwillingly, was able to work and unable to find a new job. Taking these estimates together, Halpern projects out six years beyond the change in mandatory retirement age and predicts that the labor force may have an additional 375,000 older workers as a result of the change. Since her estimate assumes that everyone who wants to work past the old mandatory retirement age of 65 will continue to work until forced to retire at age 70, it is overstated. Taking the overestimation problem into account, Halpern suggests a more realistic estimate would be around 200,000 additional workers, which is consistent with the DOL estimate.

Halpern argues that the long-run effects are difficult to project since such projections require knowing a variety of future events. The Social Security system could be changed in response to the increased size of the population aged 62 and over. Incentives for early retirement could be eliminated. In addition, the Social Security earnings test could be eliminated. Life expectancy will continue to rise and could influence the acceptability of individuals working into old age. The future may see an attitude change regarding "normal" retirement age. Given all these uncertainties, Halpern is hesitant to use her results to forecast the direction of a future response, much less the size of such a response.

Clark, Barker and Cantrell's Estimate. Clark, Barker and Cantrell (1979) use three estimation procedures to predict the increase in labor force participation due to the change in mandatory retirement age. Results of all three procedures are approximately the same. The removal of mandatory retirement is projected to increase the labor force participation of the age-64 cohort by 5 to 6 percentage points.

Clark et. al. also evaluate the differental impact of mandatory retirement on the labor force participation of minorities and women. Using data from the Social Security Retirement History Survey, they compare minority females with white females and minority males with white males. The implications of these reulsts are that, as a group, minorities tend to have lower wages and therefore a greater tendency to work until forced to retire by mandatory retirement regulations. Clark et. al. suggest that the change in mandatory retirement age will have a greater impact on covered workers with lower wages who want to work to accumulate sufficient wealth to enable them to retire.

Wertheimer and Zedlewski's Estimate. In a study for the Administration on Aging and further refined under this study, Wertheimer and Zedlewski analyzed the impact of mandatory retirement on the labor market behavior of men and single women in the 1969-1975 waves of the Social Security Administration Retirement History Survey.

Wertheimer and Zedlewski partitioned the RHS sample by age (less than 62, 62-64, 65, and greater than 65) so that the behavior of groups reaching the traditional retirement age boundaries was examined separately. Labor force behavior of subgroups reaching these ages was observed over two-(1969-1971), four-(1969-1973), and six-(1969-1975) year intervals. Differences in labor force behavior (participation, hours, job change, and earnings) of those subject to mandatory retirement and those not subject to mandatory retirement were examined using linear regression analysis. A number of explanatory factors affecting retirement behavior were examined including pension coverage on current job, age, sex, health, wages, and sector of employment, as well as interactions among these variables.

This study also found that mandatory retirement had significant negative effects on the labor supply of older workers, even when controlling for other strong retirement incentives. The most significant impact of mandatory retirement was on the probability of participating in the labor force. For 65-year-olds, the average reduction estimated for the three observation periods was 20 percentage points. For 66-69-year-olds, the average reduction found was smaller (13 percentage points for the 66-67-year-olds and 11 percentage points for the 68-69-year-olds). This study also found that mandatory retirement at age 65 had a negative effect on the labor supply of 62-64-year-olds. This anticipatory effect reduced their participation rate by about 9 percentage points.

The authors also found that, for those who continue to work, the impact of mandatory retirement may still manifest itself through a job change or a reduction in hours worked. The authors concluded that most workers waited until mandatory retirement became effective before finding new jobs. Significant effects of mandatory retirement on a reduction in hours orked were found only for 66-67-year-olds. The average reduction in hours was around 700 hours per year.

These restults were used to make a projection of the impact of raising the mandatory retirement age to 70. It was estimated that in 1985 there will be approximately 250,000 more workers aged 62-69 as a result of the change in the law. This represents an 8-percent increase in the number of workers aged 65-69 and about a 3-percent increase in the number of workers aged 62-64. The authors also point out that while these increases are significant for the older population, they result in very small changes in the labor force as a whole.

Thus, the results of this study are generally in agreement with those presented earlier. They cannot be compared directly, however, because of differences in the projection period (1985 versus 1975), differences in the total cohort projected (ages 62-69 versus ages 60-69), and the exclusion in the study of those subject to mandatory retirement at ages other than 65. (Note: An additional long-run analysis of labor force participation between 1980 and 2000 has recently been completed by Hendricks - Urban Institute. This analysis indicates similar results to other estimates and is reported in a separate part of the interim report.)

Because the estimates reported earlier were based upon a model which incorporates the effects of pension wealth and the pension-wage trade-off on labor supply (rather than just a dichotomous representation of the existence of pension coverage), one should have more confidence in them. As noted earlier, mandatory retirement and pension provisions are so highly correlated that it is difficult to estimate their separate effects. Thus, a refined representation of the pension effect is crucial for isolating the impact of mandatory retirement.

The two types of studies combined present evidence that mandatory retirement age policies have significant effects on the labor force participation of the older population.

Discussion. Table 14 arrays these different estimates of additional workers projected to continue working in response to the change in mandatory retirement age. Since the study methodologies, data sources, and time periods of analysis vary, it is impossible to make direct comparisons among the estimates. However, the range of estimates is sufficiently small relative to considerations of overall labor force dynamics to permit the use of these studies in defining the order-of-magnitude impact on older workers' labor supply that can be expected as a consequence of the 1978 Amendments.

The Burkhauser-Quinn estimate is based on the most comprehensive analysis since it takes into account in much more detail than ny other study the role of lifetime retirement income entitlements in the decision to retire. The Burkhauser-Quinn measurement of the wealth value of private pension and Social Security entitlements is the most sophisticated attempt to date to estimate the retirement age impact of both wealth and changes in wealth related to retirement age.

Table 14 Estimates of Increased Labor Force Participation of Older Workers Resulting From the Change in Mandatory Retirement Age

Source	Data Base	Age of Population	Length of Projection	Estimated Number of Additional Workers (at end of period)
DoL[a]	1976 CPS and 1968-70 SHEB Men and Women	65 - 69	3 years	150,000-200,000
Halpern[b]	Parnes Survey Samples of Men SHEB (1967, 1968-70) Sample of Men and Women	65 - 69	6 years (to 1985)	200,000-375,000
Clark et. al.[c]	RHS White Males	65	1 year	15,340-17,000 males
Wertheimer/ Zedlewski[d]	RHS Men and Women	62 - 69	5 years (to 1985)	248,000
Burkhauser/ Quinn[e]	RHS Men and Women	60 - 69	2 years (1973 to 1975)	200,000
Hendricks[f]	1973 CPS - SER, Sample of Men	60 - 70	20 years (1980 to 2000)	212,000

*Estimate based on the 1976 CPS male labor force aged 65.

Sources:

a. Select Committee on Aging, U.S. House of Representatives, (1978:131-34).
b. Halpern, (1978:23-25).
c. Clark, et. al., (1979:64-92).
d. Wertheimer and Zedlewski, (1980:36-70).
e. Burkhauser and Quinn, (1980:88-102).
f. Hendricks, (1981)

Although these estimates of additional workers represent a substantial increase in the number of older workers in the labor force, they represent a very small portion of the entire labor force. In addition, these estimates are made using labor force participation rates derived from the behavior of older workers in the late 1960's and early 1970's. These workers were making decisions in response to environmental constraints, both physical and social, which will be different for succeeding cohorts of older workers. Thus, for example, continued high rates of inflation eroding the financial security of individuals may influence large numbers of older workers to continue working. On the other hand, if firms change incentives to favor early retirement even more than presently, the projected increase in the number of older workers in the labor force may never materialize or may be smaller than estimated. Due to these uncertainties and a variety of others, the long-run impact of the law is difficult to predict.

2. Industry Studies

A number of recent studies have assessed the attitudes of the business community and workers toward the change in mandatory retirement age. These studies are useful in that they provide insights into the attitudes and behavior of those diretly affected by the change in mandatory retirement age: employers and employees. The pertinent results of these studies are summarized below.

Harris Survey. In 1978, Johnson and Higgins, Inc. commissioned Louis Harris and Associates to conduct a study of American attitudes toward pensions and retirement. The sample included 1,330 full-time employees and 369 retired people as well as 212 company respondents. The respondents for the companies were selected by the chief executive officer of each company.

The outlook of current older workers is affected by pension coverage, with those covered having the most positive outlook toward retirement. However, over 50 percent of the workers expressed a desire to continue to work instead of retiring: 19 percent wanted to work full-time; 24 percent, part-time; and 8 percent wanted to retire from their primary job and change jobs to work with a different employer.

Of those workers already retired, the major concern was inflation. Fifty-three percent of retirees wanted to work; about half of this group preferred full-time work. An earlier 1974 Harris survey found that 45 percent of elderly retirees "had not looked forward to stopping work."

Regarding mandatory retirement, respondents were asked whether they agreed with the statement: "Nobody should be forced to retire because of age, if he wants to continue working and is still able to do a good job." Eighty-eight percent of the current employees agreed with this statement, as did 67 percent of the business leaders. In a similar 1974 survey, 86 percent of the general public age 18 and over felt this way.

Spencer Study. In 1979, Charles D. Spencer and Associates, Inc., surveyed 100 employers to estimate the impact of the change in mandatory retirement age. The number of employees aged 65 or older working in the 100 sampled companies in December 1978 was 0.18 percent of total employment in these companies. As of June 1978, six months after the change in mandatory retirement age became law, the number of workers 65 and older continued to constitute 0.18 percent of total employment. However, the distribution of these workers across companies differed for these two points in time. Some companies that enforced the previous mandatory retirement age of 65 had no active workers aged 65 or older in 1978; however, in 1979 they did have workers in this age group. On the other hand, three companies that had no mandatory retirement age in 1978 had fewer employees age 65 or older in 1979 than in 1978. Other companies reported no change at all.

When asked to estimate the near-term impact of the amendments, 39 company respondents agreed that a few more employees will work longer and retire between ages 65 and 70; however, the majority of employers expected no significant change in retirement patterns. Twenty-two percent of the respondetns qualified their response by saying that continued inflation could change anticipated retirement trends. A number of respondents pointed out that employees who retired prior to age 65 generally have anticipated their retirement for several years and would not change plans in repsonse to a legal change. Since 59 companies indicated employees' retirement benefit accruals will be frozen at age 65, there will be limited financial incentives to continue working for those with substantial pension entitlements.

Hewitt Study. In November 1979, Hewitt Associates surveyed 900 members of The Compensation Exchange, a nationwide organization representing a cross-section of business and industry. Responses were received from 582 companies. The section of the survey dealing with benefit issues and the Age Discrimination in Employment Act are discussed here.

Of the 582 responding companies, 429 reported on the number of workers who continued to work past age 65. It was reported that, on average, 45 percent of the workers reaching age 65 continued to work. Since employers were not asked how this compared with the pre-1979 work behavior, a measure of the change associated with the 1978 ADEA Amendments cannot be computed. Employers also were not asked how long past age 65 those who continued to work did so.

The survey asked companies with defined benefit pension plans whether they provided for some benefit increases for employees working past age 65. A majority, 52 percent of the companies, were providing no benefit increases. In addition, 47 percent of the companies reduced group life benefits at age 65. In terms of health benefits, no clear pattern had emerged.

Copperman Study. Copperman, Montgomery and Keast (1979) conducted a study of the private business community in order to determine the preliminary impact of the ADEA amendments on: (1) continued employment of workers aged 55 and over; (2) the probable impact of the law in changing pension plan requirements in private business firms; (3) probable impact of the law on youth, women and minorities; and (4) the probable impact of inflation on the retirement decisions of employees of private firms. Results of their study for issues 1, 2 and 4 are presented here. (Findings related to youth, minorities and women appear in Part II of this report.)

A random sample of 5,000 firms were selected from the files of Dun and Bradstreet and surveyed by mail. A second sample, weighted to represent large firms and firms in industrial classifications with a high incidence of mandatory retirement, were interviewed by telephone. Of this sample, 1,636 firms responded to the mail survey, and 256 large firms were surveyed by telephone.

Most firms that had a mandatory retirement age prior to the legislation plan to maintain a mandatory retirement age limit at 70. Size of firm is a key variable in a number of findings. Larger firms were more likely to report that they would change their personnel policies and more rigorously apply performance approaches than small firms. In general, larger employers anticipate a greater impact from the ADEA than do smaller ones. However, the majority of employers (58 percent) expect no changes in response to the Amendments. It is anticipated that any effect which does result will be dispersed throughout the economy. Firms with no prior mandatory reitrement age envision less impact than do firms which had such a policy. According to 80 percent of the responsdents, continued inflation would lead to an extension of the worklife of older workers.

In summarizing these studies, it is appropriate to employ the terms "tentative and preliminary" since the data were collected either immediately prior to or immediately after the time that the Amendments became law. Thus, results either reflect an anticipatory guess or a preliminary appraisal since it was too early for the pattern of work and employer responses to have materialized. In general, surveyed employers expect little change in the average retirement age due to the change in mandatory retirement age. On the other hand, the surveys seem to reveal a desire on the part of employees to continue working.

Thus far, most employers are not reporting any major shifts in early retirement patterns. While those having a former mandatory retirement age of 65 have raised this age to 70 (majority of cases) or eliminated it entirely, they have not altered the normal eligibility age for receipt if pension benefits - usually 65. While some employees are remaining beyond age 65 under the new mandatory reitrement age policies, the vast majority continue to retire early. No clear trend of later retirement is currently discernible.

Although most employers anticipate little impact, they frequently qualify their response in light of future events. Inflation is frequently mentioned as a factor which could seriously change the labor force participation of older workers. The industry responses appear to be in a state of flux at this time. One could speculate that a clear pattern of industry response will emerge only after the pattern of worker response becomes apparent. Since these are dynamic. interactive processes, it may be a long time before the situation "normalizes". At this preliminary stage in the evaluation of the Amendments, there has been time for only the direct and most immediate responses to take place. Secondary responses, such as the employers' reactions to older workers' responses, have not yet materialized.

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